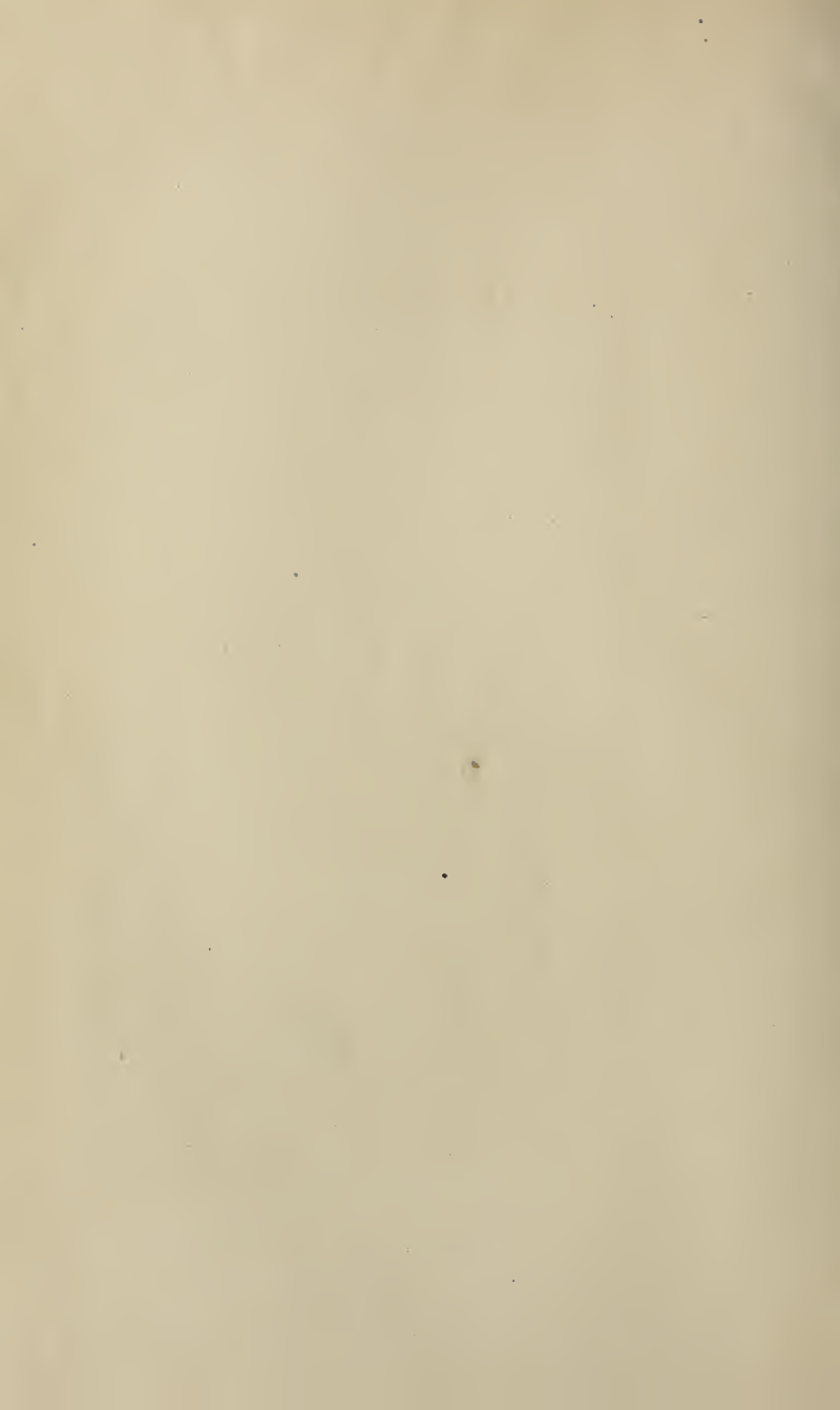


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DOCUMENTS
OF THE
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OF THE
STATE OF NEW YORK,
ONE HUNDRED AND TWELFTH SESSION,
1889.

VOLUME XV.—Nos. 105 TO 111 INCLUSIVE.



ALBANY:
THE TROY PRESS COMPANY, PRINTERS.
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STATE OF NEW YORK.

No. 105.

IN ASSEMBLY,

MAY 10, 1889.

M E S S A G E

FROM THE

GOVERNOR RELATIVE TO THE QUESTION OF "RAPID
TRANSIT" IN THE CITY OF NEW YORK.

STATE OF NEW YORK:

EXECUTIVE CHAMBER,

ALBANY, May 10, 1889. }

To the Assembly:

The necessity of providing some relief for New York city in the matter of rapid transit is the pressing question of the hour. The importance of the subject can not be overestimated. Every citizen of that city understands and appreciates the situation and is looking to the Legislature for prompt and wise action. It is the greatest city upon the continent, but its prosperity, progress and development are hampered and restricted by insufficient and inadequate means of travel.

The problem of rapid transit can not be solved without legislative action. Mere inaction is a denial of relief, and the citizens of New York, without distinction of party, implore the Legislature not to refuse them the required legislation. The local authorities of that city with great care and entire unanimity prepared a general and comprehensive measure, which has come to be known as the "Mayor's

Rapid Transit Bill," which was long since introduced in the Legislature. It met with vigorous and unexpected opposition in the Senate, but after much delay it finally passed that body and is now pending in the Assembly.

It is a measure which is not claimed to be perfect, but it must be conceded that it is reasonably free from objection, and is believed to be sufficient to accomplish the purpose desired. It is admitted to be an honest measure. It has no entangling alliances with any private or corporate schemes, but has been framed absolutely in the public interest, and is supported by all the reputable newspapers of New York city, and is favored by nearly every representative in the Legislature from that city. There would seem to be no good reason why it should not be enacted. The business interests of New York city, the voice of its best citizens, the sentiments of all classes having no private interests to subserve, unite in requesting favorable consideration.

The bill can be beaten in various ways. By invoking the obstruction of parliamentary tricks and devices, by persistently delaying its progress, by refusing to advance it, by the insertion of vicious and objectionable amendments, ostensibly designed to perfect it, but really intended to defeat it, by incumbering and identifying it with adverse and inconsistent personal, private and corporate schemes of doubtful propriety.

Public sentiment is aroused in regard to this matter, and the people will not be deceived by opposition of this nature. Those who are not for this meritorious measure are against it.

It should be frankly stated that the suspicion is abroad that this measure can not be passed unless some concessions of a political character shall accompany it, and the delays interposed to its progress and the circumstances surrounding its opposition have seemed to justify this suspicion. This is a reflection upon the Legislature which should be promptly removed. The bill is not a political one. Political promises or considerations should not be exacted as a condition of its passage. It is emphatically the people's bill, and it should be fairly treated and honestly considered upon its merits, and either passed or rejected without promises or bargainings of any kind.

Thus far it is not claimed that any improper means or influences have been invoked to aid its enactment. It is difficult to comprehend or explain why representatives from the country districts of the State, whose constituents, or themselves, are in no manner directly affected, refuse to favor a measure for the benefit of New York city, supported by all the best citizens of New York and by all its principal newspapers; and naturally such unfriendly attitude arouses the gravest

apprehensions and leads to the intimation that political or other influences have instigated such action.

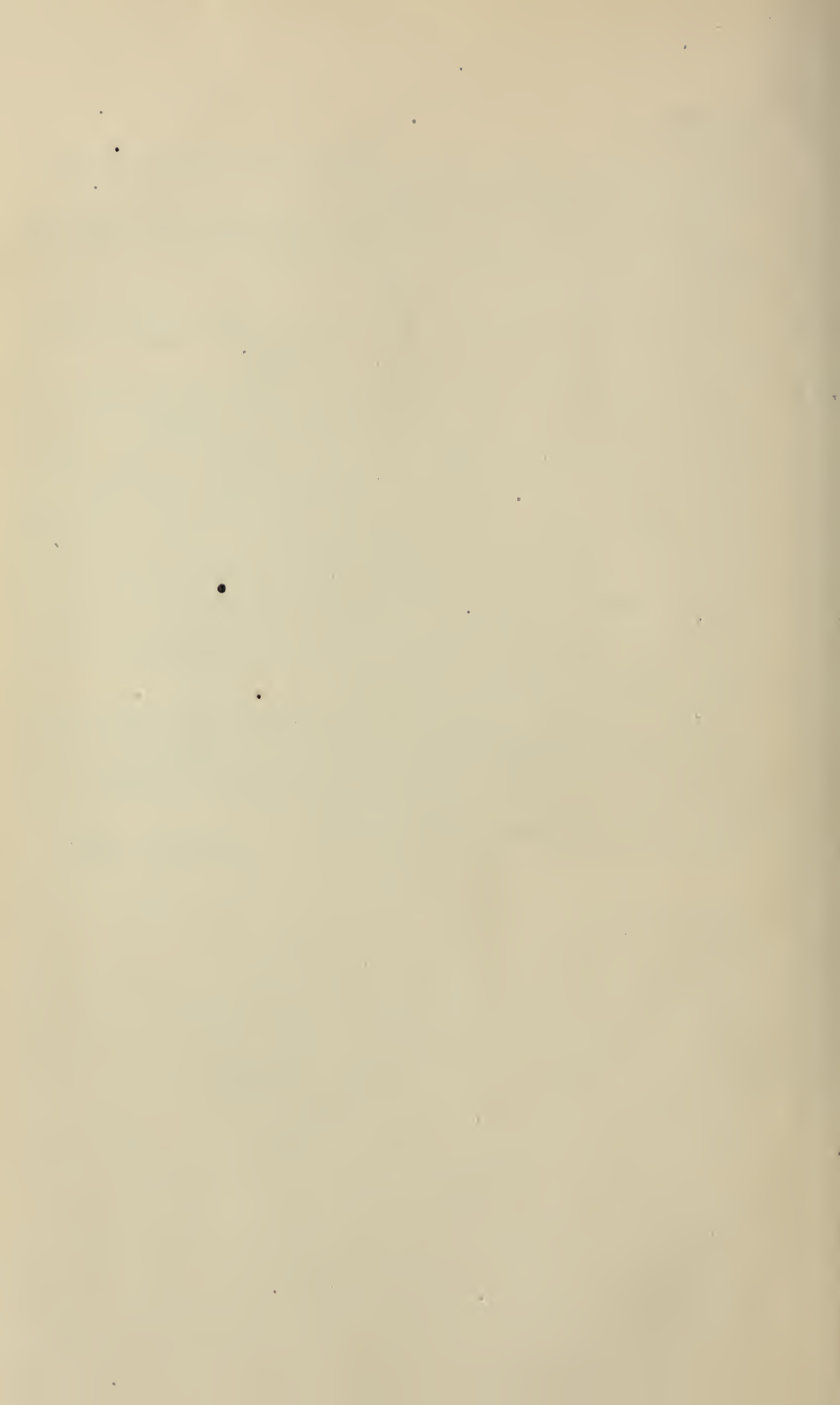
It is due to the good name and fame of the Legislature that this subject should be so promptly and fairly disposed of as to merit the confidence and approval of the people.

It is practically certain that if the mayor's bill does not pass there will be no relief afforded this year. It is to be hoped that the bill will not be defeated by inaction or indirection.

It should be clearly understood that the measure upon which I am urging action does not compel the adoption, or designate, or even indicate any particular system or plan or device to secure rapid transit for New York city's great and increasing population. It simply confers upon the authorities of that city the power to select some method which will give needed relief to the hundreds of thousands of those who are daily compelled to travel between their homes and their workshops or offices. The refusal of the majority in the Legislature to grant the possibility of such relief is an offense against the rights of multitudes of our most industrious citizens which assuredly will not be condoned.

I deem it my duty to earnestly and respectfully urge the prompt consideration of the rapid transit measure now pending before you. Its passage will be hailed with approval by all good citizens, and it will reflect the greatest credit upon the present Legislature and render this session memorable for all time.

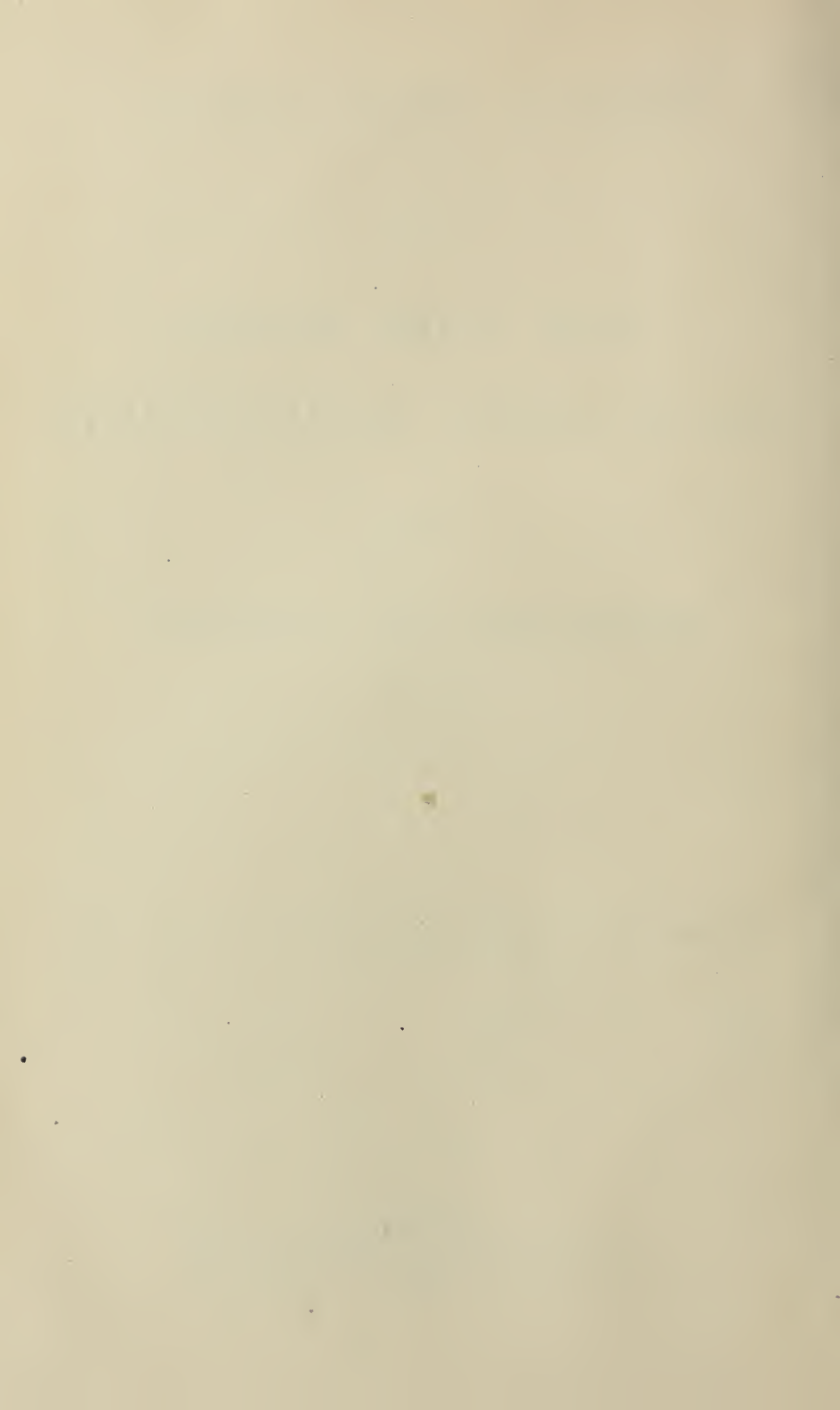
DAVID B. HILL.



TWELFTH ANNUAL REPORT
OF THE
NEW YORK STATE
DAIRYMEN'S ASSOCIATION
WITH
TRANSACTIONS AND ADDRESSES.

TRANSMITTED TO THE LEGISLATURE MAY 14, 1889.

ALBANY :
THE TROY PRESS COMPANY, PRINTERS.
1889.



ACT OF INCORPORATION.

AN ACT to incorporate the New York State Dairymen's Association.

PASSED June 22, 1881, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. All persons as now are or may hereafter become members of the New York State Dairymen's Association, organized in the city of Syracuse on the eighth day of March, one thousand eight hundred and seventy-seven, shall be and are hereby constituted a body corporate by the name of the the "New York State Dairymen's Association," for the purpose of promoting dairy agriculture and all the dairy interests of the State, and for mutual improvement in the art and science of butter and cheese manufacture and the production of milk, and for receiving and disseminating a more general information by the discussion of dairy topics.

§ 2. Harris Lewis, of Frankfort, Herkimer county; Samuel F. Miller, of North Franklin, Delaware county; Josiah Shull, of Ilion, Herkimer county; Solomon Hoxie, of Whitestown, Oneida county; Samuel E. Lewis, of Oxford, Chenango county; Albert T. Martyn, of Canton, St. Lawrence county; Orange C. Blodgett, of Fredonia, Chautauqua county; Peter B. Crandall, of Ithaca, Tompkins county; C. Porter Root, of Gilbertsville, Otsego county; Cyrus L. Sheldon, of Lowville, Lewis county, are hereby respectfully named and declared to be, in the order of their names, president, vice-president, secretary, treasurer and directors of said association for the year one thousand eight hundred and eighty-one, and until others are elected in their stead.

§ 3. Said corporation shall, in all respects, have and enjoy and be bound by the general powers, privileges and liabilities of corporations contained in, and defined by, part one, chapter eighteen, title three, of the Revised Statutes, and any by-laws heretofore adopted, or hereafter to be adopted, by such association, not inconsistent with such statutes, are hereby made to have full force and effect.

§ 4. This act shall take effect immediately.

BY-LAWS.

SECTION 1. Any person who shall pay into the treasury of this association one dollar, shall be a member until the next annual meeting, and be entitled to all the privileges and immunities thereof; and any person who shall pay into the treasury five dollars, shall be a life member thereof, and shall be exempt from annual payments. Honorary members may be elected by a majority vote at any annual meeting, in recognition of services rendered the association, and honorary members shall be entitled to all the privileges of membership, except voting for officers.

§ 2. The association shall hold an annual meeting, commencing on the second Tuesday of December, at such place in the State as shall be selected by the board of managers, for the election of officers and the consideration and discussion of subjects related to dairy husbandry.

§ 3. The officers of the association shall be a president, a vice-president, a secretary, treasurer, and six directors, who shall be chosen annually from its members at the opening of the session of the Wednesday following the second Tuesday of December, and shall enter upon the duties thereof on the first day of January following their election, and hold office for one year, or until their successors shall be duly chosen.

§ 4. No person shall be eligible as president of this association for more than two years in succession. The treasurer shall receive and account for all money of the association, and disburse or pay over the same upon the order of the secretary, countersigned by the president. The president shall appoint a committee of three members of the board, whose duty it shall be to audit all the accounts of the association. There may also be elected, at the annual meeting, fifteen additional vice-presidents.

§ 5. The president, vice-president, secretary, treasurer and directors shall constitute a board of managers, which board shall control the business of the association not transacted by the annual meeting. A majority of this board, at any regularly called meeting, shall constitute a quorum for the transaction of business.

§ 6. Public notice of all regular meetings of the association shall be given by the secretary at least twenty days before the meeting.

and a written or printed notice shall be mailed to every member thereof. All meetings of the board of managers shall be called by the president or secretary, or by any three of the board of managers, notice of which shall be given to each of the members thereof at least five days before the meeting.

§ 7. Any vacancy which may occur in the board of managers may be filled by appointment by the board for the unexpired term for which such officer was chosen.

§ 8. The place of business of this association shall be where the secretary has his residence.

§ 9. These by-laws may be changed or amended by a majority vote of all the members of the association present at any annual meeting.

O F F I C E R S.

President.

PROF. I. P. ROBERTS, - - - - - ITHACA, N. Y.

Vice-President.

MR. WILLIAM H. GILBERT, - - - RICHLAND, N. Y.

Secretary.

HON. JOSIAH SHULL, - - - - - ILION, N. Y.

Treasurer.

MR. G. W. BURBANK, - - - - - BINGHAMTON, N. Y.

Directors.

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 GEN. EDWARD F. JONES, - - - - - BINGHAMTON, N. Y.
 MR. HIRAM OLMSTEAD, - - - - - WALTON, N. Y.
 MR. F. W. EDMUNDS, - - - - - SHERMAN, N. Y.
 MR. FRANK BLANDING, - - - - - HUBBARDSVILLE, N. Y.
 MR. DUDLEY MILLER, - - - - - OSWEGO, N. Y.

Vice-Presidents.

GOVERNOR DAVID B. HILL, - - - - - ALBANY, N. Y.
 HON. JOSIAH K. BROWN, - - - - - HOLLAND PATENT, N. Y.
 MAJOR C. PORTER ROOT, - - - - - GILBERTSVILLE, N. Y.
 MR. W. P. RICHARDSON, - - - - - GOSHEN, N. Y.
 HON. SETH FENNER, - - - - - EAST AURORA, N. Y.
 MR. H. H. MERRIAM, - - - - - OSWEGO FALLS, N. Y.
 GEN. N. M. CURTIS, - - - - - OGDENSBURGH, N. Y.
 MR. J. H. SCOVILL, - - - - - NEW HARTFORD, N. Y.
 MR. GRAY B. SHELDON, - - - - - GOUVERNEUR, N. Y.
 MR. M. FOLSOM, - - - - - NEW YORK.
 MR. G. D. WHEELER, - - - - - DEPOSIT, N. Y.
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 PROF. EDWIN F. LADD, - - - - - GENEVA, N. Y.

LIST OF MEMBERS.

LIFE MEMBERS.

<i>Name.</i>	<i>Post-office Address.</i>
ALVORD, MAJ. HENRY E.....	Maryland College, Md.
ARNOLD, PROF. L. B*	Rochester, Monroe Co., N. Y.
AVERELL, HON. WILLIAM J....	Ogdensburgh, St. Lawrence Co., N. Y.
BAIRD, JAMES H.....	Speedsville, Tompkins Co., N. Y.
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BISSELL, JAMES.....	Algonquin, Ontario, Canada.
BLANDING, FRANK	Hubbardsville, Madison Co., N. Y.
BROWN, HON. JOSIAH K.....	Holland Patent, Oneida Co., N. Y.
BURBANK, G. W.....	Binghamton, Broome Co., N. Y.
BURGER, CHAS. F.....	29 Mercantile Exchange, New York.
CALDWELL, HON. LUTHER.....	Elmira, Chemung Co., N. Y.
CAMPBELL, ARBA.....	Owego, Tioga Co., N. Y.
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CLARKE, HARRY N.....	Potsdam, St. Lawrence Co., N. Y.
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CURTIS, T. D.....	Chicago, Ill.
CURTIS, ALBERT W.....	Syracuse, Onondaga Co., N. Y.
CURTIS, GEN. N. MARTIN.....	Ogdensburgh, St. Lawrence Co., N. Y.
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EDMUNDS, F. W.....	Sherman, Chautauqua, Co., N. Y.
FOLSOM, M.....	New York.
GILBERT, B. D.....	Utica, Oneida Co., N. Y.
GILBERT, WILLIAM H.....	Richland, Oswego Co., N. Y.
GREENE, WILSON	Willetts, Cortland Co., N. Y.
HALE, OSCAR A.....	Norfolk, St. Lawrence Co., N. Y.
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LAW, PROF. JAMES.....	Ithaca, Tompkins Co., N. Y.

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LEWIS, HON. HARRIS*.....	Frankfort, Herkimer Co., N. Y.
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WHEELER, CHAS. A.....	Deposit, N. Y.
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WOODWORTH, C. E.....	S. W. Oswego, Oswego, N. Y.
YOUNG, WM. I.....	149 Reade street, New York.
YOUNGS, J. W.....	Oxford Depot, Orange Co., N. Y.

HONORARY MEMBERS.

<i>Name.</i>	<i>Post-office Address.</i>
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COLLIER, DR. PETER.....	Geneva, Ontario Co., N. Y.
ROBERTSON, PROF. JAMES W..	Guelph, Ontario, Canada.

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GREENE, H. COOLEY.....	Groton, Tompkins Co., N. Y.
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OLMSTEAD, HIRAM.....	Walton, Delaware Co., N. Y.
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RINGLAND, JOSEPH.....	Oswego, Oswego Co., N. Y.
ROWE, N. M.....	Oswego, Oswego Co., N. Y.
SHATTUCK, DAN S.....	Fulton, Oswego Co., N. Y.
SMITH, GEO. A.....	Frankfort, Herkimer Co., N. Y.
SUTTON, R.....	Pennellville, Oswego Co., N. Y.
SAMPSON, A. L.....	Mexico, Oswego Co., N. Y.

<i>Name.</i>	<i>Post-office Address.</i>
TUCKER, E. B.....	Hannibal, Oswego Co., N. Y.
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MISS E. GOLDRICK.....	Oswego, N. Y.
MR. BRIGHTON BARNS.....	Oswego, N. Y.
MR. A. N. NORTON.....	Oswego, N. Y.
MR. C. S. NORTON.....	Oswego, N. Y.
MR. J. VINCENT... ..	Oswego, N. Y.
MR. A. J. TANNER.....	Oswego, N. Y.

STATE OF NEW YORK.

No. 106.

IN ASSEMBLY,

MAY 14, 1889.

TWELFTH ANNUAL CONVENTION

OF THE

NEW YORK STATE DAIRYMEN'S ASSOCIATION, HELD AT
OSWEGO, N. Y., DECEMBER 11, 12 AND 13, 1888.

PROCEEDINGS.

TUESDAY, *December 11.*

President Shattuck called the convention to order at the common council chamber, city hall, Oswego, N. Y., at 11 A. M.

Mr. BURBANK.—Mr. President: I move that the usual standing committees be appointed by the chair. Motion carried.

The chair, through the secretary, announced the following committees:

Committee of Arrangements.—Mr. Dudley Miller, Oswego, N. Y.; Hon. J. A. Place, Oswego, N. Y.; Mr. Wm. H. Gilbert, Richland, N. Y.; Hon. N. D. McCaffrey, Oswego, N. Y.; Mr. H. H. Merriam, Oswego Falls, N. Y.

Committee on Order of Business.—Mr. Wm. H. Gilbert, Richland, N. Y.; Professor I. P. Roberts, Ithaca, N. Y.; Secretary Shull, Ilion, N. Y.

Committee on Nominations.—Mr. Jesse Owen, Elmira, N. Y.; Mr. Dudley Miller, Oswego, N. Y.; Mr. E. S. Munson, Franklin, N. Y.; Mr. W. F. Edmunds, Sherman, N. Y.; Colonel F. D. Curtis, Charlton, N. Y.

Committee on Resolutions.—Mr. B. D. Gilbert, Utica, N. Y.; Colonel F. D. Curtis, Charlton, N. Y.; Mr. H. W. Richardson, East Aurora, N. Y.

Address of welcome by Mayor McCaffrey :

Mr. President and Gentlemen: It affords me great pleasure, in behalf of the common council of the city of Oswego, to tender to you a cordial welcome to our city. I think Oswego may well be proud in being honored by such an intelligent gathering as this I see before me this morning, to deliberate upon such an important question as the dairy interest of the great State of New York. I trust your stay will be a pleasant and profitable one, and anything within my power to make it such will be cheerfully done. The freedom of the common council chamber and of my own office is at your service.

President SHATTUCK.—Mr. Mayor: On behalf of the association I tender you our thanks for the cordial welcome you give us. We come to this city and this part of the country for the first time, and I trust we shall be mutually benefited, that the dairymen of Oswego county will be benefited, and that we shall receive great benefit ourselves and be better prepared for the responsibilities of the positions we occupy in trying to feed the world with good butter and cheese; and rest assured, Mr. Mayor, that we accept your hearty welcome in the same spirit in which it has been given.

Mr. OWEN.—I move a special committee of three be appointed on revision of by-laws. Motion carried.

Colonel CURTIS.—I move the chair appoint a committee of three to look after the legislative interests of the dairymen of this State. Motion carried.

Professor ROBERTS.—Mr. President: We have with us an honored guest, the secretary of the Vermont State Dairymen's Association, Mr. E. L. Bass, and I move you that he be made an honorary member of the New York State Dairymen's Association. Motion carried.

President SHATTUCK.—I announce the committee on revision of by-laws, as follows: Jesse Owen, of Elmira; Frank Blanding, of Hubbardsville, and S. D. Gilbert, of Utica. On legislation, Colonel F. D. Curtis, of Charlton; A. Devereaux, of Deposit, and Josiah Shull, of Ilion.

Colonel CURTIS.—Mr. President: I move that this evening be set apart, after 8 o'clock, for the consideration of suitable resolutions in reference to the deaths of Professor L. B. Arnold, Honorable Henry R. Low and Mr. E. M. Haynes, members of this association. Motion carried.

Colonel CURTIS.—I take great pleasure in calling attention to some charts, which have been prepared at the State Experimental Station, that are exceedingly instructive. They are designed to show the analysis of food—the constituent elements of food, and foods which produce fat and which produce fibre. These charts show the results of actual experiments.

Professor Ladd explained the charts in a very interesting manner.

Colonel CURTIS.—Our western farmers have a great surplus of corn meal and they feed large quantities, and an interesting fact is that they think it is necessary that their steers should run out doors and be exposed to the weather, giving them better appetites. Now, those steers, having been fed an excessive amount of heat-producing food, did not probably digest more than half of it, it being such a concentrated carbonaceous, heat-producing food that it was a great relief to them to be out in the cold. Now, instead of proving that it is best economy to turn steers out in the cold, it does not prove any such thing.

When the cattle are turned out into the cold they have to use the fat that is stored in their bodies to supply the heat necessary for their existence. The farmer who turns his cattle out in the cold is not only depleting their strength and substance, but he is giving them an unnecessary and unnatural appetite. Now, if cattle are kept warm they will winter on much less food than otherwise required.

Honorable SETH FENNER.—In the county in which I live (Erie) we have some farmers who have tried this experiment of housing their cattle, and have abandoned it; they turn their cattle out doors and feed them there, and they claim that they can make more money in that way than by keeping them housed.

Professor ROBERTS.—I think this question, suggested by Mr. Fenner, is of importance, and has not been fully answered. I have lived on the western plains and I can understand fully why an animal shut up in the barn, such as the western farmer has, in such a climate, may not feed as well as he does in the opening.

A barn full of cracks, where the heat generated by the animal is not held, is a colder place than it is out doors, and the animal would much prefer to be out to the straw stack than to be held by the head in a barn, lying on the frozen or wet manure, with the air sucking through the floor and the barn doors. That has been one difficulty, and in order to overcome that difficulty they feed a large amount of corn. They find it cheaper to use corn than to build warm buildings. It is a financial matter to be solved, each one for himself, according to his condition and surroundings. It is a very plain matter; if we keep the animal warm we save a large percentage of food. If animal heat must be kept up to ninety-eight degrees in order to sustain life and health, it must have fuel to burn, and that fuel costs money.

Professor ROBERTS.—*Resolved*, That the chair appoint a committee of five to submit plans for work of the State Dairymen's Association for the coming year, and that such committee report to this body. Carried.

The chair named the following as such committee: Professor I. P. Roberts, Jesse Owen, F. W. Edmunds, W. H. Gilbert and F. Blanding.

Convention took a recess until 2 o'clock, P. M.

AFTERNOON SESSION.

President Shattuck called the convention to order at 2 P. M., and announced the first order, an address by Dr. Collier.

Dr. COLLIER.—Mr. President and Gentlemen of the Convention: I have not come before you with a prepared address. I was kindly requested by your secretary to be present, and I suggested to him that I had a few thoughts upon dairying that I would be very glad to present. They are in some respects like the statistics that Mr. Brown mentioned that he had in his possession, and they are startling, at least, to me. Whether they are in the same line as those of Mr. Brown or not, I do not know, but I believe them to be truthful. The trouble has been with our farmers in the past that they have been encouraged in this rule of lumping off things and have not attended with sufficient care to figures, to per cents, to the fractions of the per cent, which means their profit or loss when applied to practical results. One of the highest compliments in my opinion that was ever paid me in regard to my work was by a newspaper man who said "When

I come to you I always get per cents and decimals, and pounds and ounces," and I confess that I am partial to that sort of statement.

At first blush the thing that strikes anyone in considering the dairy interests of New York State is its immensity. A State imperial in many respects, it stands in the number of its cattle and milch cows, the first State in the union. Statistics show that we have 1,540,000 milch cows in the State; that is an incredible number. We may grasp it better perhaps if I state that it would make a continuous solid drove five abreast from Buffalo to Albany, We have 10.4 per cent of all the dairy cows in the United States, and we have immense States devoted to dairying as you all know. The value of our milch cows is 12.8 per cent of the value of all the milch cows in the United States, and aggregates almost \$47,000,000.

Now, the first thought I have in regard to the dairy interests of this State is this: That if the angel of destruction should pass over the herds of our milch cows with some intelligent discrimination and sweep off to-night three-fourths of a million, or fifty per cent of them, next fall the profit from our dairies would be vastly increased over that of last season, notwithstanding the enormous loss of about \$24,000,000 worth of cows. I think before I am done I shall be able to prove that fact. In other words, half of the cows we have do not pay for their cost of keeping. They are more or less of them loss, and the best we can say of the other half, is that they either do pay for their cost of keeping or they are some slight profit. That we know because it is the universal statement that the profits of dairying have not been satisfactory nor remunerative.

A good many years ago, before the days of railroads, in traveling from Superior City to St. Paul, I observed in approaching St. Paul, we passed thousands of acres of as beautiful land as the sun ever shone upon, which had been taken up years before, and upon which houses and fences had been built and subsequently abandoned. Now, if those settlers were not possessed of sufficient intelligence to have rectified those lands, which in a few years of cropping they had exhausted; if they lacked the intelligence or capital to do so, they acted wisely in abandoning those lands; and I say that if fifty per cent of our cattle are in such condition that they do not yield us a profit, that it would be

wise if driven to that alternative, to knock them in the head and haul them to the compost heap. We have, of course, a better means of disposing of them, but we should get rid of them all the same.

Now, I have some statistics I would like to present, which show we have not improved much since 1874, when these statistics were prepared by Mr. Edward Wickson. In 1884 Mr. Edward Wickson gave the results from ninety cheese factories and creameries located in widely different localities, and containing over thirty-six thousand cows. The average yield per cow was thirty-nine dollars and fifty-seven cents; the highest average of a single factory was fifty-five dollars and seven cents; the lowest average for the same number of days for a single factory — that is the lowest average yield per cow, was thirty-one dollars and twenty-two cents. The difference between the highest factory and the lowest factory, as their average yield was given, was as 176 to 100; there was one dairy at that time that was giving a yield of seventy-six per cent greater than the others. In the factory reporting the highest average per cow, that is fifty-five dollars and seven cents to the cow, the cheese sold at fourteen dollars and eleven cents, and took 9.76 pounds milk to the pound of cheese. In the factory of the lowest average, which was thirty-one dollars and twenty-two cents, it sold for nearly a quarter of a cent less per pound and it took nearly half a pound more milk to make a pound of cheese. It was not the prices got, we see by this, but the actual yield which determined the relative value of these cows. The product sold in the market for approximately the same. Now, of those dairies sending milk to sixty of the factories, the highest season's average per cow was eighty-two dollars and seventeen cents; the average value of the highest dairies was fifty dollars and four cents, the lowest yield fourteen dollars and fifty cents, average per cow; and the average of all the poorest dairies was twenty-nine dollars. The dairy which had the best cows yielded a return proportionate to those having the poorest cows as 567 to 100; five and two-thirds times the yield one dairy gave compared with another. I have some figures of the last year only, which confirm these results; these are old. I wish they had entirely passed away, but they have not. Here we have those average differences from a large number of cows of 176 to 100.

Now, here is a gentleman from New York who has promised to present a summary of his results, Mr. C. W. Jennings, of Bellville, N. Y., who has been taking "a cow census," and I have gathered together fifty-seven dairies reported by him containing 976 cows, and I have grouped them under several heads; those yielding an earning per cow of from fifteen to twenty dollars; those from twenty to twenty-five; twenty-five to thirty; thirty to forty; forty to fifty, and so on. Then I have selected for another purpose the amount of grain or meal, or what you might call the cash paid for food that was fed to these animals, and have calculated in dollars and cents the amount each cow consumed. Four dairies, containing forty-six cows, earned nineteen dollars and thirty-nine cents; they ate one dollar and forty-three cents worth of meal. Ten dairies, containing 173 cows, earned twenty-two dollars and sixty cents each per cow. That is not profit but actual earnings, and the average amount of grain fed was three dollars and eleven cents, that they consumed, besides their other food. Fourteen dairies of 234 cows, twenty-six dollars and seventy cents; grain, two dollars and forty-seven cents. Sixteen dairies of 284 cows, thirty-six dollars and thirty-nine cents; value of meal and grain fed each animal, four dollars and eighty-three cents. Eleven dairies, 145 cows, earned forty-three dollars and twenty-two cents; meal, six dollars and eighty cents. Three dairies, fifty-four cows, earned fifty-three dollars and ate eleven dollars and four cents worth of grain each. I don't expect anyone has followed this, but you will have observed that there has been a continuous increase in the earning of the cows with the continuous increase in the amount of grain or shorts or bran or meal fed to the cows, and this is from a wide number of dairies, fifty-seven in all. Now, it does not follow that while these earnings were greater that there was a greater profit, but, as matter of fact, the figures will show that there was. We find that with an increase of forty-nine cents worth of grain per cow the increased earnings were three dollars and eleven cents. For fifty-five cents worth of grain fed the increase was four dollars and twenty cents. With two dollars and thirty-six cents' worth of grain fed it gave nine dollars and sixty-nine cents increase. The next one dollar and ninety-seven cents in grain fed gave six dollars and eighty-three cents increased earnings. The four dollars and twenty-four cents in grain fed gave nine dollars

and eighty-six cents; so that really we have an increased yield and profit which is all the way from 664 per cent to 132 per cent above the value of grain fed. It shows conclusively that it pays to feed grain; that is the point in every case. The lowest increase, and that was where they got to about the maximum limit of profitable grain feeding, they fed eleven dollars worth of grain to each animal; but then, even, it paid 132 per cent profit over what they obtained who fed six dollars and eighty-three cents worth of grain, for where they fed four dollars and twenty-four cents worth more of grain they got nine dollars and eighty-six cents more profit. And this hinges right on to what Mr. Ladd stated this morning, of the importance of proper rations. Mr. Ladd is engaged in similar work at the station to that shown to-day, and hopes to continue, because of the great practical value his experiments have, aside from the scientific interest attached to them.

Here are some recent figures from the New Hampshire Station: I will only give a summary of them. The average cost per quart of milk from the whole herd in five different rations, which were experimented with, was two and seventy-four hundredths cents. The average cost of the milk per quart of the poorest cow in the herd on the whole five rations was four and twenty-six hundredths cents; nearly twice as much. The average cost of the best cow on the five rations was one and fifty-nine hundredths cents, as compared with four and twenty-six hundredths cents. That clearly shows not the effect of feed, but the difference in animals, a difference of nearly 200 per cent. Now, with the best cow on the best ration it cost one and thirty-two hundredths per quart; with the poorest cow on the poorest ration it cost five and thirty-five hundredths cents, a difference of fully 400 per cent. There is a difference not only of breed but of feeding also, which can hardly be over-estimated. I doubt whether anyone not having the figures will question the general fact here stated that there is a difference of 400 per cent in the profitable keeping of dairy animals dependent upon only two things: selection of the cows and the selection of the ration which shall be fed the cow. A difference of nearly two hundred per cent depending solely upon the selection of the cows.

Now, I have here, in connection with this subject, another letter which was handed to me only to-day, which is exceedingly interesting. I happen to know the gentleman who has done this thing

very well ; I traveled with him about the country a great deal some fifteen or twenty years ago ; he then told me what he does now in this letter, that his herd of dairy animals — he was a dairy farmer at that time — was not yielding him over 150 pounds of butter per cow. I wish our dairy farmers in New York could average anything like that — but he says that did not satisfy him, and he was bound that he would have his herd average a yield of 300 pounds of butter to the cow, and he told how he was going to do it, and now here is the report of what he did. The year ended September 1st, 1888, and he has thirty-four cows. I will not read the whole statistics, but I would say that his average receipt per cow, less cost of keeping, was fifty-three dollars and sixty-one cents ; the cost of keeping per cow was forty-three dollars and fifty cents, making ninety-seven dollars and eleven cents as the total earnings per cow ; and his net earnings per cow, deducting all the expense of marketing his products, of packages and of freight and of everything, the net earnings per cow was forty-seven dollars and sixty-one cents, and the average annual yield per cow was 302 pounds. The average yield of butter per cow was 302 pounds. His brother has surpassed him a little, he says—I am not giving the figures entirely—but he says his brother's average yield was some twenty pounds per head better than this. Now, of course, we read in our agricultural papers about these phenomenal yields, fifteen, seventeen, twenty, twenty-five, and I don't know but they may reach yet 75,000 pounds of milk per cow. It is simply incredible. But we have well authenticated cases of cows giving over 20,000 pounds of milk per cow. But there is no use in talking of those results as average possibilities, for they are not. But, do our cows average 7,000 pounds of milk ; do they average 5,000 or 3,000 ? I question whether they will average 3,000 ; and that is one-seventh of what is possible. Now this gentleman, who fifteen years ago was getting 150 pounds of butter per cow, stated what he was going to do and the way in which he was going to do it, and he has now done it ; and even somewhat surpassed the figures.

There is another consideration to which I wish to call your attention, and that is the question of the growing of grass and hay. I wish it might be that twice the acreage of hay might be produced that has been in the past. It would mean profitable agriculture ; it would mean an increase in the fertility of our soil.

I am more or less familiar with the statistics, and some of them are surprises to me, and I will present them to you. The average value of the hay crop in the United States during the past twenty-five years has been more than the average value per acre of the cereal crop. The average value of the hay crop is fourteen dollars and sixty-two cents, and of the cereals thirteen dollars and twenty cents. Not only that, but the average value of the hay crop has steadily increased relatively, while the cereal crop has gradually decreased owing to a decrease in prices. During the past twenty years there has been but three years when the acreage value of hay was not more than the acreage value of cereals.

Now, in regard to New York, how is it? The acreage in our State in the six leading cereals is 6.13 per cent less the last five years than the first five years of the last quarter of a century; but the acreage of the hay crop is 38.43 percent more the last five years than it was in the first five years. The average aggregate value of the cereals has decreased 47.62 per cent from what it was in the first five years of this period, while the hay has nearly maintained itself, it has only decreased 2.31 per cent. I mean the average aggregate value. These statistics I think are reliable. I have taken the first aggregate of five years and the last aggregate of five years and compared them for another purpose only, which I will show hereafter. In the first period of five years the acreage in hay was ten per cent less than that in cereals in the last five years, the acreage in hay is twenty-five per cent more than the acreage in cereals. You see we are catching on the idea that it pays to grow hay; and while twenty-five years ago we had less acres in hay — ten per cent less than we had in cereals; now we have twenty-five per cent acres more in hay than in cereals. In the first period the value of the hay crop was 29.2 per cent less than the aggregate value of the cereals; in the last period the value of our hay crop was 31.9 per cent more than the aggregate value of the cereals. The average acreage value of hay in the first period was only 78.59 per cent that of the cereals. In the last five years it was ninety-nine per cent. The acreage value of the hay crop has increased, while that of the cereal crop has diminished. Twenty-five years ago it was about seventy-nine per cent, now it is ninety-nine per cent of the value of the cereals. Now each one can judge for himself whether his land will produce a fair crop of hay as compared with a fair average crop of cereals.

Now, let me give you some statistics in regard to the use of hay. There has not been, in my judgment, a ton of hay sold in the State of New York for the last fifty years which brought the farmer anything like what it was worth to that farm. In my judgment there is no practice more ruinous than the selling of hay from the farm. I have some figures, but I will not give them, but will give a few conclusions. You all know that we are using in this State each year several million dollars worth of these so-called commercial fertilizers. You all know why they are bought. It is because they contain one or two or three of three fertilizing constituents, viz. : Phosphoric acid, potash and nitrogen. If they do not contain one or two or three of these different things they are not worth ten dollars a ton. There is no fertilizer sold which can be worth over eight or ten dollars a ton without containing one or more of those three substances, and yet they might be made to be worth forty or fifty, if enough of these were present in them.

Now, hay contains these very things, just as wheat does, and it is to supply these things that these fertilizers are put upon the soil. Now, how much does hay contain, and how much is it worth a ton? By analyzing we can ascertain and know, and also know its market value, just as we may know in regard to sugar, salt, or any other commodity in the market.

In 1886 the average value of hay sold in New York was ten dollars and seventy-five cents per ton. That hay contained thirty per cent of its value in phosphoric acid and potash; it contained 39.4 per cent of its value in nitrogen, and when fed to stock would have yielded back to the farmer practically all that; so when hay is fed on the farm you may almost say you "Eat your cake and keep it also." They give back to the farmer 69.4 per cent of its commercial value in fertilizing material. What then was left of the ten dollars and seventy-five cents, the average price? Three dollars and twenty-nine cents! In other words, if the farmer who sold a ton of hay for ten dollars and seventy-five cents, and who produced the hay, or anything else upon his farm, was compelled to buy commercial fertilizers, we have to take of the ten dollars and seventy-five cents seven dollars and forty-six cents to purchase the phosphoric acid and potash and nitrogen that was in the ton of hay he sold, and he would have gone back home again carrying three dollars and twenty-nine cents as really the net

proceeds of his ton of hay. There is no possible escape from that.

And there is another consideration of fundamental importance in regard to our New York land. It is important as concerning young men and young women who are growing up, and who look out and beyond the State to see if there are not more favorable circumstances elsewhere for building up a home and fortune in farming. It is a grave mistake, in my judgment, for so far as I can learn there is no place on the face of the earth that affords greater opportunities for profitable agriculture than does New York State. I have a few statistics gathered from the census statistics of the last twenty-five years, which show that taking our three leading cereals, wheat, corn and oats, during the last half of twenty-five years, the average acreage yield of these three cereals, as compared with the average acreage yield during the first half of the twenty-five years, is only a little less than one per cent. We have, therefore, practically maintained the fertility of our land, and we can grow as much wheat or corn or oats on our New York lands, I might say, as we could twenty-five years ago. In regard to barley, which is a very important crop, during the last half of twenty-five years our average acreage yield has been four per cent greater than it was the first half of the twenty-five years. We can judge of the importance of these facts when we compare these with the results of the great exhaustless West, as it is sometimes called. Take, for instance, the ten central Western States—Ohio, Illinois, Indiana, Wisconsin, Minnesota, Missouri, Kansas, Iowa, Nebraska, and add California. Those States produce almost two-thirds of all the wheat and corn produced in the United States, viz: 63.1 per cent of wheat and 63.2 per cent of the corn. They are the States which yield us all the wheat and flour we export, and practically all the pork we export. Not only do they yield sixty-three per cent of the amount, but they yield 60.3 per cent of the value of the wheat crop and 52.4 per cent of the value of the corn crop. During the past twenty-five years statistics show that the average yield of these ten States has decreased. For the first half of the twenty-five years the average yield of wheat was 13.95 bushels per acre, and the last half 10.63 bushels per acre, a loss of a trifle less than one per cent in our yield in New York, while in the ten States mentioned they have lost nearly ten per cent. During the first half of the twenty-five years the acreage yield of

corn in these ten States, that produce sixty-three per cent of our entire corn crop, was 32.24 bushels per acre; during the last half of the twenty-five years, 30.84 bushels per acre, a loss of a trifle over seven per cent. Ours was less than one.

We see, therefore, that while our results are not such as we could wish, still there is a vast difference between the average yield of the two sections. Why, a gentleman here told me, within an hour, that he was accustomed to get from twenty to thirty bushels of wheat to the acre; another told me that he had been able to get fifty-two bushels to the acre. That is one of the possibilities here in New York. The average results show our farms are now as productive as they were twenty-five years ago. They are more productive now than are the fields of the west, and therefore I do not see but what a man can do successful farming in New York State, if he only learns how to do it. I am greatly encouraged in everything I have learned about the State. We have had, as you know, an exceedingly unfavorable season for work at the Experimental Station, in the labors of which I hope you feel a great interest. But we are planning work which will be, in my judgment, of immense value to the dairymen. We have made preparations for feeding animals of different breeds, and they are to be subjected to a fair, continuous and exhaustive test, as to relative value for the purpose of producing milk, cheese and butter; and as the evidence of the interest that various gentlemen have taken, I will state that some of the breeding associations have appointed committees to select the animals to be placed there in competition. Now, what we propose to do is to find out what these animals are good for, and what their relative value is. I believe that the result will be of immense value to the dairy interests of the State. We are now engaged in feeding animals, and Professor Ladd has explained to you in regard to the rations used. We have at the present time five animals under feeding, and we believe that the experiments will be worth ten times what they cost in solving this problem of how to properly feed, not alone for milk and beef, but for pork and lambs, and of poultry, and it may be that there will be a saving of at least fifty per cent in the amount, or value, of food necessary. And in the matter of poultry, you almost laugh in considering that industry, and think it comparatively insignificant, but there is only one crop in the United States that

surpasses the value of poultry, and that is corn. We hope to get some results that will bring this matter of poultry to the front. You may say that we have no interest in this matter, but the experiments in the fattening of animals in the production of beef and the production of pork, or the production of mutton, will throw light upon our investigations in the feeding of animals for milk, or feeding of poultry for eggs, as also their production.

I did not expect to take so much of your time, but I thank you for your attention, and while I can hardly expect to convince any one that it is to their interest to pick out fifty per cent of their herds and knock them in the head, yet I believe as much as I believe in my existence, that there is money in it for at least seventy-five per cent of the dairymen of the State of New York. The only danger is that you might not know, as I would not know without experiment, how to judiciously select the fifty per cent, but you ought to know before the season is half through what are the relative values of your different animals that have supplied you with milk. And until you do know that, it seems to me that you are justly chargeable with a disregard of the principles that underlie success. That means profitable dairying; the chief cause of complaint among dairymen arises from a disregard of these things. I will tell you an incident that happened in my experience: I was riding in the cars with the vice-president of one of the American associations of dairy cattle, and we were talking about these matters, and I told him of a friend of mine who went to Maryland to take charge of a herd of cattle for a gentleman, and in the herd was a famous old animal that had taken prizes wherever she was taken, at all the fairs, but when this man entered upon investigation of the relative qualities of the herd, do you believe that animal was down almost to the tail end of the list as a source of profit; almost the least valuable cow in the herd. After a few minutes this gentlemen turned to me and said, "How do you tell, anyway?" There is not a dairyman in the house now that doesn't know how to tell, but the only fault is that he don't use the knowledge he has.

He ought not to go away from this meeting without being able to know and for himself to determine within five per cent what the relative values of his animals are.

Col. CURTIS.—Mr. Chairman, I agree with Dr. Collier in regard to the importance of eliminating from the herd the cows that are

not profitable ; but I shall take issue with him in regard to his conclusion with reference to growing grain, and especially wheat, in this State as compared with the west.

Dr. COLLIER.—I intended to show that we had maintained our fertility, and did not intend to urge people to go into wheat growing in New York.

Col. CURTIS.—I believe that the Lord designed this State to be the grass growing, the hay producing, and the dairy State. I hold in my hand a document issued from our experimental farm at Geneva, that I am free to say is the most valuable document ever emanating from that station, and which ought to be put into the hands of every farmer in the State, for in it he will find the digestible value of all the food grown on the farm. Now, this document tells us that wheat straw contains a very small percentage of digestible albuminoids, and it requires albuminoids to make butter, and to make growth of muscle and to build up the physical frame of the cow. I find the most valuable hay to be blue grass, next orchard grass, then clover, while timothy stands nearly at the bottom of the list. I want to see a great reform throughout the State in the raising of fodder plants that are adapted to the purpose of producing more solids.

Mr. FENNER.—In the county of Erie there are imported hundreds of thousands of tons of hay from the west. When the hay crop is short farmers are often obliged to buy hay, and what would become of them if no one would sell any hay?

Dr. COLLIER.—I will not abandon my position in regard to the selling of hay. If my neighbor should come to me and say that he was out of hay and wanted a few tons, and would give me what it is worth, that I may replace its value on my farm, I would let him have it.

Prof. ROBERTS.—Mr. President, for a long time I have talked on the subject of manures and the question has been, how to get it before the people so they would understand it, and so they would act upon what I said. I have given this subject a great deal of study and thought, and I have a little circular which is to form a part of my address to-morrow. There is so much of it that I will be unable to explain it fully, and I am going to take the last page and get at some of the subjects, and some of the reasons why our farms in many instances are deteriorating, and discuss some of the methods by which we can avoid it. Cotton-

seed meal has 40.56 per cent of albuminoids. Two thousand pounds of cottonseed meal gives 120 pounds of nitrogen. Nitrogen has a commercial value all over the United States, and if I put that value to it, it is seventeen cents; and I have twenty dollars and forty-six cents. Now add the other manurial values to it and I get about twenty-eight dollars out of it. Then we talk about ammonia. Divide ammonia by twelve and multiply by fourteen and we get something we can multiply by seventeen cents per pound. I simply give this to show how easily we may find out these values, and you need not know how pure nitrogen looks nor how phosphoric acid looks. Now, on the back page I will take, for illustration, cottonseed meal: Ten pounds of cottonseed meal for an animal, and allow that twenty per cent is used up in milk, it leaves us eighty per cent of its manurial value. Now, ten pounds of cottonseed meal is worth about eleven cents—that is the manurial value of it after it is fed to the cow. If you feed ten pounds of straw to your cows, you will have about a cent's worth of manure. If you feed ten pounds of cottonseed meal with it you will have almost eleven cents worth of manure. The manurial value of ten pounds of timothy hay after feeding is two cents, one pound is worth two mills, and six pounds is worth twelve mills. A ration for a thousand-pound cow is twenty pounds of corn fodder, five cents; four pounds of cottonseed meal, five cents; six pounds of bran, six cents; two pounds corn meal, two cents, making eighteen cents. Now we have a well-balanced ration, that costs eighteen cents. The manure from that ration is worth eleven cents. This ration is for a cow giving a large quantity of milk.

A barn-yard 110 feet by 100 feet contains almost exactly a quarter of an acre. In the State of New York there are thirty-two inches of rainfall. An inch of rain means 100 tons of water per acre. A quarter of an acre means 800 tons. Eight hundred tons of rainfall on that barn-yard yearly.

By experiment it is shown that for every ton of water that goes through my barn-yard of manure carries sixty cents worth of plant food with it. Shall we throw it out under the eaves where sixty cents worth of it will disappear with every ton of water? That is the question that we have got to meet, and we must meet it right here and now.

Now, about this timothy hay. Can you afford to sell timothy hay and bring back that fertility which you have got to have on

the farm in order to keep the capital stock good, in some other form? That is the only question. It is a dollar and cent question. If you sell hay you should receive enough for it to replace it. That is the whole problem.

If you feed a cow weighing 1,000 pounds such as ordinary grass and cornstalks, she will eat about 100 pounds on an average per day, and you may expect about two-thirds of that weight in manure. If you feed dry material, as in winter, and give the cow water as she wants it, you may expect twice as much weight in manure solids and liquids, as you feed dry material. Now, a load of manure made under shelter is worth from three to four dollars, and even more. Now, I appeal to you, if this product of the barnyard, at the present time, is not the most valuable product of the dairy. Your milk, butter and cheese is nothing, in winter, in comparison with the value of the manure the animal makes. The manure of a well-balanced ration is worth one-half what a cow eats. If I saw my farm growing steadily poorer and poorer I would sell the farm for what I could get and set up a peanut stand. I would be a man there, and I could not run but a day or two without my profits exceeding my expenses. The income must exceed the out-go, that is the real solution of the problem, and I trust we will go home and profit by these suggestions. It is action, not talk, that accomplishes these good results. We should not go home and continue to throw our manure out of the window to be washed away by the rains. Some haul it direct from the stable to the field at all times of winter. Why put manure on your fields in spring? Is that the way the Lord manures his farm? Is that the way he has raised these great oaks and chestnuts and pines? No, He raised a plant to feed an animal to make fertility, and He always spreads his manure in the fall.

MR. VAN GELDER.—In regard to manures, I am fully satisfied that seventy-five per cent of the farmers of this State have no way provided for its preservation. They throw it out from their barns and stables and the great part of it washes away with the rains. Last winter I drew manure from the stable and spread on about eight acres of ground, then I drew it in heaps on four acres in the old-fashioned way, and left it there until I got ready to break it up, and then spread it, and I found that where I spread it as I drew it from the stables my grain was much better than where I put it in heaps, and spread it afterward.

Mr. FRENCH.—I would ask Prof. Roberts the difference in value between liquid and dry manure.

Professor ROBERTS.—Liquid manure of the cow contains about one-half of the total value of the voidance. The nitrogen is found in the urine, and hence the liquid droppings are usually worth nearly or quite as much as the solid droppings from the ordinary milch cow.

As to why the corn is better where the manure is spread in the field, it is simply because the plant upon which the manure was spread fed up upon it, and locked it up and held it ready. Plants do grow in winter; they are growing now; the roots are storing up for next summer. Spread your manure where there is a plant growing if it is possible.

Mr. OLMSTEAD.—Are you in favor of fall plowing and top dressing?

Professor ROBERTS.—I am not in favor of fall plowing. I would never destroy a plant until I was quite certain I could grow another plant immediately upon the same ground, and a better one. Before you kill one of nature's plants that she has grown with so much care, be quite sure you can grow a better one in the place of it.

Recess to 7.30 P. M.

EVENING SESSION.

President Shattuck called the convention to order at 7.30 P. M.

Mr. FENNER.—Are brewers' grains good for dairy cows?

Mr. GARDINIER.—After having used brewers' grains for twenty-five years in Oswego, I am satisfied that it is an excellent food, and I have even gone so far as to put brewers' grains in a silo in the month of June, when I had an excess of feed, and fed it in December with good results.

Mr. FENNER.—I believe the analysis of brewers' grains, when taken from the brewer before fermenting or commencing decomposition, shows it to be healthy food.

Colonel CURTIS.—Brewers' grains causes a large flow of milk of a very good quality, if fed before fermentation, but if commencing to decay, then it does not make good milk or good butter or cheese.

President Shattuck announced the regular order of business for the evening, an address by Mr. Dudley Miller, of Oswego.

HOW TO IMPROVE DAIRY COWS.

[By DUDLEY MILLER, of Oswego, N. Y.]

Mr. President: The dairy interest in New York State is represented by a capital of over three hundred million dollars, and more than one and a half million dairy cows. These cows average an annual product of a little over three thousand pounds of milk; valued at a cent a pound, makes a yearly income of about thirty dollars a head. When we realize that exceptional herds average 5,000, 8,000, 10,000 pounds of milk, and even more, it behooves us to inquire the reason. Animals are of a plastic nature, and vary to a remarkable extent in form and other characteristics, according to climatic influences, their surroundings, methods of handling and breeding.

Witness the Shetland pony, in whose native land it has suffered so much from cold and scanty feed, that we find as the result a diminutive horse. In contrast to the Shetland is the large draught-horse of the Netherlands and certain parts of Belgium and France, which weighs from five to ten times as much as the Shetland, owing principally, if not solely, to the difference in climate, feed and surroundings. These different types may be intensified or improved when exported to other countries, according to circumstances. It is the same with cattle. In the mountains in Wales, in the rocky hills of Ireland, and the Island of Jersey, is found a small and medium-sized cow; whereas, in the rich, succulent pastures of the Netherlands (Holland), in the rich valley of the Tees in England, and in similar localities we find large cattle, as the Holstein-Friesian, the Shorthorn-Durham and the like. As an illustration of the power of man to vary the forms and characteristics of animals at will, note a breed of sheep in Massachusetts, which was bred from one that had an unusually long back and short legs. The owner, in the course of time, bred his sheep with such long backs and short legs that they could neither jump fences nor stone walls. Another case is that of Miss Nott, of this State, who bred all the feathers off her chickens, so that down was their only cover, and hence they were unable to fly. Thus it is seen from the number of instances cited, which might be increased, that is within our power to alter certain characteristics of sheep and chickens. We can also change the characteristics of our cows, and have already the cow producing, in her

normal condition, milk sufficient for her calf only. Now, an instance is recorded of one cow's producing over thirty thousand pounds of milk in one year, and over one hundred pounds in a day has been given by several cows. If we desire to change our cows we must breed on the same principle as that followed by the breeder of the sheep; by Miss Nott, with her chickens, and those who have made great milk and butter-producers of certain breeds of the bovine family, viz., retain only those animals which possess the desired qualities, and those which approach them in the greatest degree.

First, we must study the surroundings and causes which have resulted in producing what we want, and then proceed in accordance with them. Suppose my cows give but 3,000 pounds of milk in a year, go dry four months, live on poor pasture, are barely kept alive in winter, are forced to stand in cold barns with icy winds whistling through the cracks! Suppose they have to be tailed up in the spring, and helped out to the pasture where it takes them half the season to gain enough strength to return any profit! When they do get strong the best of the grass is gone and pastures begin to dry up, and then these poor creatures have to use their hard earned strength to get feed enough to keep alive, leaving profit entirely out of the question. With this treatment cows are not profitable. How can they be made to return a profitable income? It can be done by following the methods practised by successful dairymen, whose cows produce twice or three times as much as those just described. This can be learned by talking with and writing to these successful men taking good dairy and live stock newspapers, and profiting by the experience of others, which is constantly described in such papers. The colder barns are the more feed it takes to keep the cows warm which are housed in them, therefore we should make our barns warm, when necessary, by battening up the cracks, as this is cheaper than heating cows up with feed. Then the feed which was used to counteract the temperature of the cold barn, will in the warm one produce beef or milk. It is important to bear in mind that the chief advantage in keeping improved stock is that it gives a better return for abundant feed and good keep than ordinary stock. If you have easy keepers, cows that consume little, you have as a rule poor producers, cows that will run you in debt. It takes a certain amount of food to sustain life, before any milk or beef can be

produced, and the more feed a cow converts into beef or milk the better the cow. Hence, the profitable cow is a large feeder. In order to find out the money-makers and the robbers in the dairy it is necessary to keep an accurate account with each cow, charging her with the cost of keep, and crediting her product. Many dairymen know the cost of keeping their entire herds, and also what they produce, but few are aware of what each cow makes or steals, that is, consumes more than she produces. This can be told only by keeping an individual account with each cow, as a banker keeps a separate account with each depositor, crediting each with what he pays in, and charging him with what he draws out. It is a very simple matter to number each cow in the herd, if not named, and enter their number or names on the top line of a blank milk record (a sheet of paper ruled for the purpose with the dates on the left, so arranged as to leave a line for each day of the month with sufficient space for morning and evening milkings). Tack this record blank to a board, and hang it up in a stable, also a spring scale in a convenient place near the milker, who weighs and records in the proper place the amount of milk each cow gives, which is footed up monthly, and at the end of the year the totals are footed, when the profit or loss may be ascertained, by comparing the value of the product with the cost for keep. Every fall the poor cows, better named robbers, should be sold, or better yet, fattened and killed, and their places filled with profitable cows. This practice of weeding out annually the unprofitable, and those cows which produce the least, will result in the success of whoever follows it. With sufficient time, intelligence, wise handling and breeding, it might be possible to succeed without buying stock of the improved breeds, in which the much coveted good qualities have been so strongly fixed that they are reproduced with a great degree of certainty.

It requires a lifetime, and sometimes several lifetimes, to fix these good qualities so thoroughly in any breed that we can reasonably expect to reproduce them at will. Hence, it is more economical and profitable for us to purchase an individual that has, and whose direct antecedents and descendants have, the desired qualities, and breed from it. If sufficient means are at hand, buy several of this kind, but if you have not enough to buy one alone, get some of your neighbors to join with you in the purchase of a superior bull, and soon you will be on the road to success.

President Shattuck announced the order the consideration of resolutions in respect to deceased members of the association during the year.

Professor ROBERTS.—Mr. President, ladies and gentlemen.—It is my painful duty to announce the death of Professor L. B. Arnold, a life member of this association.

Lauren Briggs Arnold was born in Fairfield, Herkimer county, N. Y., August 13, 1814. He died at Rochester, N. Y., March 7, 1888.

Born and reared on a farm, disciplined by the rugged conditions which prevailed three-quarters of a century ago, physical stamina, intellectual grasp, enduring faith in justice and truth, aspiration and love for God's creatures, all so firmly implanted in the man's nature that they became a part of himself and remained active and vigorous as long as life lasted. A boy at the beginning of the century, struggling with father and mother and nine brothers and sisters on fifty acres of land to gain a livelihood and an education. What tenacity of purpose, what indomitable perseverance, what heroic effort it required in his day to acquire a liberal education. At twenty, teaching school winters and learning a trade in summers. At twenty-four, with a mere pittance of money he enters the academy—at twenty-seven, Union college and graduates at the age of twenty-nine. Does he not deserve to be called a hero and a lover of learning?

Now he begins to live his ideal life, that of a farmer, a teacher, a student and a writer.

With little thought of himself and no desire for wealth he now gives his time and his means to the work of investigation. The colleges in his day gave little or no training in the sciences which underlie agriculture, but this fact did not deter him from studying, as best he might, text books on animal and vegetable physiology and chemistry. At sixty-five years of age, we find him working in the chemical laboratory of Cornell university trying to discover the then unknown cause of the ripening of cheese and the effect of acid on rennet and on the ash of milk.

At one time we find him president of the American Dairyman's association—at another lecturing in Canada. Now a teacher, and now at work in his cheese factory, which was said to more nearly represent a laboratory than a factory.

Now the accredited representative of the dairy interest of the United States at the Centennial Exposition, and now the representative of the same interest in Great Britain.

No words of mine can adequately express the self-sacrificing spirit, the quiet, heroic perseverance of this man, whom we all delight to honor. It matters little where or when he was born or where he died. The good he did while living, the works and influences which he left behind, the rewards of which do follow him; these are of paramount importance. One person among the vast throng is but a speck, a mite; but one noble influence, one truth discovered, one fact proven, which shall pass down through the ages benefiting and helping untold millions is of priceless value. Amid the hurry and worry of life we shall soon forget his stately form and kindly face; but the good he did will go on widening and blessing multitudes who will never even know his name. They honor the man most who best appreciate the work he did. The great lesson which we may learn from the life of this plain citizen, is that perseverance in any noble work and self-sacrifice for the good of our fellow men, places us in our true relations with the created and the Creator, and permits all to share in the good conferred by an unselfish life.

MR. PRESIDENT.—I offer the following:

WHEREAS, Professor L. B. Arnold, our fellow-worker, has been removed from us by death; therefore,

Resolved, That the account of his life and services be spread upon the minutes of the association, expressive of our great appreciation of the valuable benefits conferred by Professor Arnold to agriculture and to the world, by his painstaking efforts in investigations for the improvement of dairy husbandry.

Resolved, That a copy of this resolution, together with a copy of the memorial address be presented to the eldest son of the deceased.

MR. SHULL.—Mr. President, Ladies and Gentlemen: I rise to second these resolutions. In doing so, I will say that there has passed from us a good and useful man; one of those men we can ill spare. Mr. Arnold's services have been of great value to the dairy interests of the State and country. No person was his superior in dairy knowledge and science in the world. This has been so recognized by the best authorities of the old world.

Mr. Arnold was one of the original organizers of the New York State Dairymen's Association, and was a life member. His name appears as one of the speakers at the annual meetings of the

association every year from the time of its organization to the present time.

In 1886 he accepted an invitation from the British Dairy Farmers' Association, to attend a conference of the association held at Derbyshire, England, of which Lord Vernon was president, which invitation was seconded by this association, and Mr. Arnold attended the conference. At the annual convention the same year held at Norwich, he delivered an address on the subject of his visit to Europe. This was the last time he appeared at the meetings of this association. Last year he dictated an address while on his sick bed, which address was read at the convention, at Middletown, by his request.

My long and intimate acquaintance with Mr. Arnold was of a character that endeared him to me as that of but few men. He was a kind and true friend, devoid of hypocrisy or deceit in any way; and a man of noble and pure character. It is with sadness and mourning I contemplate his death and that I shall never more be privileged to enjoy his presence nor to listen to his counsels and words of wisdom.

Colonel CURTIS.—Mr. President: I can not let this opportunity pass without joining in a tribute of respect to the memory of the late Professor Arnold. I knew Professor Arnold by reputation for many years before I was privileged to make his personal acquaintance. I never knew a man so modest, so unassuming, so unpretentious, so painstaking, so earnest and so learned in the various branches of dairy husbandry, as he.

No allusion has been made here this evening to the valuable work of dairying, of which L. B. Arnold is the author.

I am happy to know that since his death, and I announce the fact, that all the papers of the additional investigation he had made for a new edition of his book, have been transferred to Major Henry E. Alvord, now of Maryland Agricultural College with a view of a new edition of this work.

I can add nothing to the high character which has been expressed of Professor Arnold. I feel his loss very much. He was a useful, earnest and good man; a warm and faithful friend; a man who devoted the best part of his life towards the advancement of that interest which we all have at heart.

Mr. FENNER.—I should be recreant to my better feelings if I did not add a word on this occasion. It was my good fortune to

be born in the county of Herkimer, and in the town adjoining that in which Professor L. B. Arnold was born, and though he was many years my senior, I was intimately acquainted with him about twenty years, and everything that has been said of him, I heartily indorse. I admired Professor Arnold for his frankness, his open-heartedness and his generosity. No man has done more for the farmer than L. B. Arnold. He consecrated his life to agriculture.

Professor ROBERTSON.—Mr. Chairman: We meet this evening to mourn the loss of a mutual friend. Many Canadians knew Professor Arnold as a man of most genial disposition, and very noble and unselfish in his motives. We knew him as a man possessed of a clear head and a kind heart. Professor Arnold was a man eminently useful and eminently good, and no monument to commemorate and perpetuate his memory can honor him as much as the high esteem and deep affection felt for him by every one who was favored with his acquaintance. I am reminded of the lines of the poet:

“Then let us pray, that come it may,
As come it will for a’ that,
That sense and worth, o’er a’ the earth,
May bear the gree, and a’ that.
For a’ that and a’ that,
It’s coming yet, for a’ that,
That man to man, the world o’er,
Shall brother’s be for a’ that.”

Mr. PLACE.—Mr. Chairman: I move the adoption of the resolution by a rising vote. Carried, by all rising.

Professor ROBERTS.—Mr. President: I have a further painful duty of offering a resolution in regard to the death of Senator Henry R. Low, another life member of this association:

Resolved, That in the death of Senator Henry R. Low, the dairy-men of the State of New York, and all others interested in agricultural pursuits, have lost one of their ablest, most influential and valuable friends.

His untiring energy in the Legislature of the State in framing laws to prevent the manufacture of spirituous and deleterious butter and cheese, and by the unremitting warfare he waged upon all who were adulterating and debasing the most essential articles of human food, entitle him to the gratitude of not only the dairy-men of this State, but of all the public; and this association take

this occasion to express in the most emphatic manner their deep sense of obligations they have been under to their departed friend.

Resolved, That the dairymen of the State of New York beg leave to express their deep sympathy with the family of Senator Low, and to mingle their grief with that of the bereaved family and friends, and assure them that while the poignancy of this great loss of theirs, it is fully shared by the people of the great State whose most important interests he did so much to promote.

Colonel CURTIS.—Mr. President and Gentlemen: It is a sad duty to express memorial words over the death of a friend, but such is my duty to-night. My acquaintance with Judge Low began over a quarter of a century ago. During all that time I knew him as a warm-hearted, honest, earnest, true friend, and always ready to serve the interests of the people, stepping to the front in investigations in the adulterations of butter and other products which were offered as food to the people of this State. We owe it to Judge Low the enactment of those laws which have been a blessing to the farmers of this State. It was he who was largely instrumental in giving us the machinery in this State that we call the Dairy Commissioner's department, which has proved so effectual in its operations, in the protection of the dairy interests of the State. And we congratulate ourselves to-night that the dairy interests of this State can look forward to a future of advancement and prosperity. Mr. President and gentlemen, we do owe a debt of gratitude to Judge Low, and it is fitting that we should so express ourselves this evening, and I heartily indorse the resolutions. They reflect our minds, our hearts and our gratitude, and I can say that the memory of Judge Low is engraven in the archives of this State, and will be embalmed in our hearts. He was a citizen of whom we are all proud, and I believe I voice the sentiment of the dairymen of the State of New York in all that I have said.

Mr. FENNER.—Mr. Chairman: I fully indorse everything embodied in the resolutions relative to Judge Low.

Mr. SLOAN.—Mr. President: I rise, with some reluctance, to say a word on the resolutions, because I am not a member of this society, and am only here as an interested observer of your proceedings. But the sentiment of these resolutions so touches my heart that under the circumstances I feel like asking the privilege of offering a feeble tribute to the memory of the departed. I have

known Senator Low a great many years, by reputation, and known him most favorably. Four years ago I became personally acquainted with him, and for the past three years I have been very intimately associated with him in some of the work in which he has been conspicuous, and to which reference has very appropriately and properly been made. I may mention, as coming under my own observation, the interest he took in the legislation that was enacted last winter regarding the appropriation for the farmers' institutes, and for providing means to give instruction in butter and cheese making, and all legislation affecting dairy interests.

It is also true that there has been no subject in which the dairy-men and farmers of this State were interested in which Judge Low was not always at the front as the advocate and defender. I believe that, without disparagement to others, it may be said that this association has lost its best and most effective friend. I may also state that Judge Low was a man very highly respected by all his associates, and I can say with sincerity that I indorse every word that has been said here to-night. He was a man who never had so many duties, so many responsibilities, that it seemed to be any task to him to take upon himself a new burden, if it seemed to him that by so doing he was able to advance the interests of his constituents and the interests of the people of this State. He formed his own opinions after careful consideration, and after they had become well grounded. He had the courage of his convictions, and when he voted upon a question he knew why he had done so, and could sustain his position with power and ability.

I am glad to thus pay this tribute to Senator Low, and only regret that I had not known that some action was to be taken, so that I might have gone back and reviewed his life in connection with legislation, and to have made a tribute that would have been more satisfactory to myself and more fitting to the great merits of his character. He was a man, also, who impressed himself upon his neighbors in a very remarkable way. I was one of those who was invited to attend his funeral as one of the pall-bearers, last week, and I think I never observed more genuine sorrow expressed than I saw in the city of Middletown. It seemed as if everybody recognized the fact that they had not only lost a public benefactor, but that they had each lost a personal friend.

I am very glad, Mr. Chairman, that this organization has so quickly made a recognition of its appreciation of the high character of Senator Low. The least we can do, when our associates leave us, is to place on the records a tribute of our regard and of our affection, and it is most fitting and proper that this association should place such a tribute upon its records, and I most cordially join in the motion that has been made, that the resolutions read may be unanimously adopted.

Adopted by a rising vote.

Professor ROBERTS.—Mr. President: I still have another painful duty to perform in offering the following resolution in reference to Mr. E. M. Haynes:

Colonel Curtis in the chair.

Resolved, That in the death of E. M. Haynes, of Oxford, this association has lost an earnest and zealous worker in the advancement of the dairy interests of the State.

Resolved, That we deeply sympathize with the family of Mr. Haynes in the great loss they have sustained, and hereby take leave to express and mingle our sorrow with theirs.

Mr. SHATTUCK.—Mr. Chairman, and Gentlemen of the Convention: In the loss of our friend Mr. E. M. Haynes, although he was not as extensively known as Professor Arnold or Judge Low, yet in my opinion he was a man who performed the duties devolving upon him with as much zeal and as conscientiously as those who were better known to the members of this association. It has been said by some here that they had known Judge Low for a quarter of a century. I have known Mr. Haynes for a much longer time. I associated with him when a boy—we were boys together. I have known him intimately all his life, and can truthfully say that those who knew him best loved him most. He was twice called upon to represent his town in the board of supervisors of our county, and was elected when there was a large majority politically against him, which showed the worth of the man in the estimation of those who knew him well. Some time in the month of May last, he bid good-bye to his family and went to the city of Philadelphia on business. The next day after arriving there he went into the dining-room of the hotel for his supper, complaining of not feeling well. He soon got up from the table, and before he reached the door he was dead. We mourn him as we mourn a brother, for he

was a brother to many of us. And it is my sad duty, on account of my intimate acquaintance with him, to say these few words in respect to our departed friend, E. M. Haynes.

Resolutions adopted unanimously.

Mr. OWEN.—Mr. Chairman, I move you, that out of respect to the memory of our departed friends, we now adjourn until to-morrow morning at 10 o'clock.

Adjourned.

MORNING SESSION.

WEDNESDAY, *December 12.*

President Shattuck called the meeting to order at 10 A. M.

Mr. FENNER.—Prof. Wing, can you give us any light upon feeding apples to cows giving milk?

Professor WING.—There have been some experiments made at the university which show that apples fed in moderation will increase the flow of milk and not injure the quality. If fed in large quantities it destroys the appetite, if in small quantities it stimulates it.

Commissioner BROWN.—Major C. P. Root told me some time ago that from his own experience he was entirely satisfied that apples could not be fed to cows giving milk for butter or cheese without being an injury to the product.

Mr. MANN.—I have had some experience and observation, and I believe apples, if judiciously fed, to the amount of a bushel a day, can be fed with good results.

Mr. FENNER.—Should cows be watered before or after feeding?

Professor ROBERTS.—A cow should not be watered directly after eating a hearty meal. She should be given water an hour or an hour and a half after feeding.

Mr. FENNER.—What does the association think of winter dairying?

Professor ROBERTS.—Cows are kept to give milk, and to let them lie idle six months in the year is a shame and disgrace to American enterprise. What would you think of a banker who would hang up a card on the front door of the bank giving notice that the bank is to be closed during the cold weather? Suppose he should say, it is too cold weather to do business in the winter, but we will open up again in the spring. How do you suppose

his business would prosper? The other day I asked a man if he was making butter this winter and he replied, "Oh, yes; this is the time to make butter to sell; I can get thirty-five cents in the open market for good butter now." Now, if you put cows in a poor stable and feed them timothy hay you will not get much butter from them. The object of our meeting here is to try to instruct, to right these things.

Mr. B. D. Gilbert, from the committee on revision of the by-laws, reported that they had made sundry amendments. Report read and adopted. (See by-laws.)

Mr. Owen, from the committee on nominations, reported a list of officers of the association for the year 1889, and recommended its adoption. Report unanimously adopted by rising vote. (See officers, page 6.)

Professor ROBERTS.—I thank you, ladies and gentlemen, for the honor conferred upon me in choosing me as your president. I hope I may be able to perform the manifold duties and meet the responsibilities attached to this office. You hardly can appreciate, without stopping to consider, the great interests which are locked up under this name of "State Dairymen's Association." It reaches to every household in the land. There is not a hamlet, not a cabin, not a hotel, and not a farmer's table, but feels the effect in some way, direct or indirect, of this association and of its work. I again thank you for the honor conferred and for the many honors conferred by the people of the State of New York.

Colonel Curtis offered a resolution as follows:

Resolved, That we most earnestly request the appointment of J. S. Woodward, the present secretary of the New York State Agricultural Society, as Commissioner of Agriculture.

Resolved, That a certified copy of this resolution be forwarded to the President-elect by the secretary of this association.

Adopted by a rising vote.

Also, the following:

WHEREAS, It is evident that we, as farmers, are unable to judge of the composition or quality of the commercial fertilizers offered for sale; and,

WHEREAS, We are at present compelled to depend wholly upon the representations of the manufacturers of and dealers in these commercial fertilizers; and,

WHEREAS, We believe there exists the possibility of extensive frauds and abuses in the manufacture and sale of these commercial fertilizers; therefore

Resolved, That our representatives at Albany in Senate and Assembly be urged to give their influence and vote to the passage of Assembly bill No. 592, introduced by Mr. Maynard, March 15, 1888, or to a similar bill to provide for the inspection and proper control of the trade in commercial fertilizers, in order that the farmers of New York State may have the same or similar protection to that which is given to the farmers of every other State where these fertilizers have come into general use; further

Resolved, That the secretary of this meeting be requested to send a certified copy of these resolutions to the Member of Assembly and Senator representing this district. •

Resolutions adopted.

Mr. Edmunds, from the special committee relative to plan of work for 1889, reported as follows:

Your committee to whom was referred the matter of educational work of the association, feel impressed with the necessity of a wider spread of dairy instructions in the production and care of milk, and the manufacture of butter; therefore, recommend that the State Dairymen's Association hold not less than forty conferences during the season of 1889, to give instructions in the production of milk and the manufacture of butter, in such places in the State as the officers of the association may designate. And that such conferences be of the character of neighborhood gatherings, and that two competent instructors be employed to conduct such conferences, and that such instructors be required to briefly report the transactions of each conference to the secretary of this association.

On motion of Mr. Curtis, report adopted.

The chair announced the order of business an address.

[Assembly, No. 106.]

CANADIAN CHEESE-MAKING.

[By Professor JAMES W. ROBERTSON, of Ontario Agricultural College,
Guelph, Canada.]

Mr. President, Ladies and Gentlemen: I address you to-day on this subject, encouraged by and happy in the knowledge that reciprocity of thought is always mutually beneficial to us as men, and to Canadians and Americans as dairymen. Statistics of the magnitude of the cheese trade of Canada would be of little interest and of still less service to you. I shall confine myself to a presentation and explanation of the agencies and methods that have helped us to rapidly and profitably extend our cheese-manufacturing industry. Our recognized primacy of reputation in the British markets has not been gained without persistent effort guided by intelligence and judgment. Many years ago the highest possible price was not realized for our finest cheese in Liverpool or London, except under the blind of an American brand. It might be a more truthful, though less courteous construction to put upon that unpardonable practice of by-gone years, were I to say that many of our finest makes of cheese were the American brand because of the status in the market, which their superior quality gave to the name thus unfairly stenciled upon the boxes. The good sense universally accorded as the dairymen's trait of character, prevented any international complications or difficulties arising from that one-sided reciprocity in branding. The branding was in those days confined to the cheese-boxes.

In the infancy of our cheese business, the quality of the product of many factories was lamentably irregular and defective. The English markets offered an outlet and created a demand for the surplus of your dairy products as well as ours. To thoughtful men it was at once evident that the demand was practically limited only by our joint capacity to furnish uniformly fine food, in the form of cheese, at moderate prices. Every pound of poor, sour, hard, unpalatable, indigestible cheese that is sold to anybody shuts off the demand for and consumption of at least five times as much cheese of fine quality. For that reason every dairyman was interested in the quality of the cheese made anywhere, which found its way to the plate of the British consumer. Some of your broad-minded men were willing in those years of uncertain dairy methods to come over and help us. In so doing their magnanimity reverted to the benefit of their own State. We

sorrow with you in the absence from gatherings such as these of grand, noble-minded men like X. A. Willard, Harris Lewis and L. B. Arnold. We Canadians have appreciated and do acknowledge the value of their thought and work to us. Their memories are deeply respected by everyone under our flag who had the honor of their acquaintance.

The dairymen's associations have been the principal agencies through which the information indispensable to our progress was spread. Their annual conventions offered opportunities for the interchange of knowledge. Discussions frequently shaped into definite information of real value what had been before only detached theory or hazy idea. Then itinerant instructors were employed to visit as many factories as possible, to give actual demonstration of the best methods of handling milk, curd and cheese. The worth of that system was so generally recognized that its extension was desired. During the present season eight persons have been employed by the dairymen's associations of Ontario, as milk inspectors and cheese-making instructors. The expenses have been met from a fund formed by a grant from the associations, supplemented by contributions from the factories receiving the benefit of such services. The results have been satisfactory where competent men were employed. The inspection of milk and the conviction and exposure of patrons who furnished it adulterated have had a very wholesome effect on its general quality and condition. In the spring of the year, district dairy conventions are held for the particular benefit of cheese-makers. Occasional bulletins of timely information are issued from the dairy department of the Ontario Agricultural College. Through central meetings of patrons and the medium of farmers' institutes helpful information on the care of milk and its preparation for cheese factories is circulated. Dairy literature in the press of the day has done us excellent and commendable service. In the person of Thomas Ballantyne, M. P., of Stratford, a man of continental and European reputation, we have had a stand-by whose disinterested efforts for the improvement of Canadian cheese, have in some measure helped every man who keeps a cow. These are the important organizations and agencies through which our cheese-making progress has been aided.

The value and importance of a correct theory for cheese-making practices have been ignored. In all efforts at definite instruction

he only is a safe teacher who draws a clear line of distinction between his knowledge of facts and his theory or opinion as to the relation of the facts to each other. Most men have clear and definite knowledge of many facts who still stumble with childish weakness when they attempt explanations of their theories. Yet a proper understanding of the underlying principles that govern the changes in any product, which is being manufactured, enables the workmen more intelligently, and therefore more successfully, to apply any method that may be recommended and described. I take it that such understanding is, in other words, the recognition and acceptance of a correct theory.

For that reason, I will try to further explain the theory of Canadian cheese-making before I proceed to present a statement of the details of the best practice. Long experience has demonstrated certain methods to be well adapted to the certain production of uniformly fine cheese, when the milk is all right. But as the raw material of the cheese-maker—the milk of cows—is seldom in precisely the same condition upon two consecutive days, he should be able to intelligently modify the details of any method to meet the peculiarities of the milk he handles. As the work of dairying becomes extended, it seems that milk has new parasitic foes. Some taints are growing undesirably common. “Gassey curds” which years ago were the rare exception in a well-managed factory are now so general that few factories are without them from July until September. There is an ever increasing need for the cheese-maker not only to know the routine of the best processes, but to understand the “why’s,” “wherefore’s” and “when’s,” of all parts thereof.

As related to the food consumed for its production and to the conditions under which it is ordinarily given, milk is perhaps the most variable of all the animal products. The milk of cows in the best of health, fed on the most suitable of feed, and with every care, circumstance and influence favorable for its production is a very complex compound of compounds. Dissolved in about ten times their weight of water there is a mixture of casein, albumen and sugar, which mixture holds in suspension from three to five per cent of butter-fat in the form of small globules. In size these vary from one-fifteen-hundredth part of an inch in diameter down to immeasurably small granules. Such, in brief, is milk, as the cheese-maker needs to know it. Besides its inherent

tendency to decay, milk is a liquid most susceptible of contamination by any impurities that may be adjacent to it. It offers the many germs of destructive ferments with which the ordinary air swarms a most inviting and favorable field for their multiplication and operation. Hidden beneath the evident purity of its snowy froth, float the agents that immediately begin to work for its decomposition. Other organisms that live by its destruction are sown into it ere ever the tiny stream from the milker's hand strikes the pail. *This, then, is the perishable compound, at its best, which it is the cheese-maker's business to preserve in a palatable nutritious condition, for adult human food, conveniently prepared for transportation.

Simple evaporation to dryness would provide conditions conducive to long preservation; but the cost of that process interferes, and even condensed milk as a food finds a rather limited market. The reduction of the bulk of the milk by the separation of part of its water is the first essential step in the process of cheese-making. This should include and be followed by such treatment of the portion retained for cheese as will make it most valuable in the food markets. By rennet coagulation, parts of the milk — mainly its casein and part of the fat which the casein envelopes — are separated from the water which still holds the albumen and sugar in solution. The nature of such coagulation, to put it in other words, is to solidify the curd of the milk out of its state of solution in the water of the milk. By such solidifying or coagulation of the casein, it thereby incases in its own structure as curd, the globules of fat suspended in the milk. After the rennet coagulation is perfect, 100 parts of the contents of the cheese vat may be described as

	Parts.
92 parts liquid composed of	87 water.
mixed with	4 milk sugar.
	$\frac{3}{4}$ albumen.
	$\frac{1}{4}$ ash.
8 parts of curd composed of	$\frac{1}{2}$ ash.
	$3\frac{3}{4}$ casein.
	$3\frac{3}{4}$ fat.
<hr/> 100 <hr/>	<hr/> 100 <hr/>

These two composite parts of coagulated sweet milk are together as a mixture of two compounds.

The means whereby the separation, as to contact, is to be effected may be classed as mechanical or physical and vital or chemical. The mechanical means includes the cutting of the curd to facilitate the passage of the liquid part to whey out through the insoluble mixture of casein and fat. There is apparent need for perfect coagulation before the cutting is commenced. When the casein is completely separated (in this sense coagulation is separation) from the liquid part, the fat globules will be firmly held in place while the watery part, the whey, is being separated out from contact with them. The cutting should be fine enough to permit and promote easy and sufficient separation without disturbing or destroying the physical structure or texture of the curd. The watery part, the whey, is then filtered through the structure of the casein and out through the forming skin of each curd particle. Cubes of five-eighths of an inch have been discovered as the best size.

Stirring the curd is undertaken to hasten and help the separation. Heat is applied for the same purpose. The process is usually expressed as "cooking," "firming" or "drying." A temperature of 98° Fahrenheit is most helpful, but a higher temperature leaves the casein less suited for the solvent action of subsequent fermentation. Sufficient moisture must be left in contact with it to permit of all the casein becoming easily soluble and diffusible.

Among the vital or chemical means used to effect this separation, between the soluble and insoluble, is lactic acid. Its presence renders the casein less soluble. At the same time it hastens the separation of the whey out from the particles of curd. When the acid is developed to excess the cohesion of the molecules of the curd is weakened. Lactic acid prevents the development and operation of the putrefactive ferments. It also makes slow the process of curing. By curing I mean the fermentation whereby the casein is made soluble in the cheese. The degree of acid development will not be excessive if the separation of the whey, out of contact with the curd, be well effected before it begins. The addition of salt arrests the action of the lactic acid on the curd. It also retards the curing fermentation. In the autumn months there is need for the addition of more salt than during the summer. Such extra salt will give a full flavor, a safe-keeping flavor and a slow curing firm body.

In barest outline I have touched upon the theory of Canadian cheese-making. I have supposed the milk to be in its normal or best condition, good, pure, sweet and from healthy cows. Much of the milk offered at cheese factories is not of that quality. If the milk be in a tainted state when drawn from the cow, the taint will be due (1) to volatile oils from her feet; (2) to the presence of ferments, vibriones, from putrefactive germs in the air, the water or feed; or (3) to disease in her body.

Aeration of the milk is good treatment in all of these cases. By dipping, pouring, stirring, or any other method of aeration, objectionable volatile oils and the animal odor are evaporated. The presence of oxygen from the air prevents the vibriones from becoming active. There is very much advantage from the aeration of all milk, especially so when the milk is tainted. The cooling of milk prevents the vigorous or quick action of the microbes that split the sugar into acid, and it also retards the action of other ferments. Age permits the preparation of the milk for ready separation of the solids from the watery portion by promoting, to a helpful degree, the energies of the lactic ferment. Tainted milk is only with much difficulty coagulated perfectly. I do not yet understand why. I think that a part of the casein has been decomposed by the microbes, the cause of taint. I have learned to use an additional quantity of rennet in such milk. Putrefaction of the casein, or any nitrogeaneous matter which is not coagulated, is rapid when curing begins. Bad odors and bad flavors always result from such decomposition. Often cheese "goes off in flavor" from the imperfect coagulation of the casein.

Let me mention the methods and conclusions of a few experiments in this connection.

I. On July thirtieth a quantity of milk was put into one vat and thoroughly mixed. It was then, in equal parts of 1890 pounds each, put into the three compartments of a vat which had been so constructed. The temperature of all three lots was exactly alike, viz., 85° Fahrenheit. At 11 A. M. three ounces of Hansen's rennet extract per 1,000 pounds of milk were added to lot 1; five ounces per 1,000 pounds to lot 2; and eight ounces per 1,000 pounds to lot No. 3.

After coagulation and cutting all three were gradually and carefully heated to 98° Fahrenheit. By 2.05 P. M. acid hairs could be seen by the hot-iron test from the curd of all the lots. The

they were then drawn off and the curds were dipped into a sink having a linen strainer on maple racks. They were kept under similar conditions of temperature, gradually declining from 98° to 94° . They were packed up close and frequently turned. By 4.30 P. M. the curds were sufficiently mellowed and enough acid was developed for the application of salt. The curds were then cut and hand stirred for fifteen minutes. Salt was applied to each lot at the rate of two and one-half pounds per 1,000 pounds of milk. The temperature was then 86° . The different lots were put to press as nearly as possible at the same time, temperature 80° .

July 31.

	Pounds.
Lot 1, three-ounce extract, weighed from the hoops	171 $\frac{1}{4}$
Lot 2, five-ounce extract, weighed from the hoops	175 $\frac{1}{4}$
Lot 3, eight-ounce extract, weighed from the hoops	177 $\frac{1}{2}$

September 14.

	Pounds.
Lot 1, three-ounce extract, weighed from the hoops	165 $\frac{1}{2}$
Lot 2, five-ounce extract, weighed from the hoops	169
Lot 3, eight-ounce extract, weighed from the hoops	170 $\frac{3}{4}$

On August twenty-eighth the qualities were compared; lot 2 was first; lot 3, second; lot 1, third.

On September fourth another examination was made, when lots 1 and 2 were considered equal, and both better than lot 3.

On December thirtieth lot 1 stood first in point of merit; lot 2, second; and lot 3, third. The difference, however, was not very marked. On January thirteenth an examination by a committee of experts appointed by the dairymen's association confirmed the above December judgment.

From July thirtieth to September fourteenth all the cheese made experimentally were kept under the temperature conditions of an ordinary factory curing-room, from 80° , which was too high, to 60° . From December fourteenth till December thirtieth the cheese were kept in boxes at an average temperature of 50° .

II. On August second a vat of milk was similarly prepared; 1,900 pounds were put in each of the three compartments, the temperature being 88° .

At 10.35 A. M. three ounces of Arnold's rennet extract per 1,000 pounds of milk were added to lot 1, five ounces per 1,000 pounds to lot 2, eight ounces per 1,000 pounds to lot 3.

After coagulation and cutting all three were gradually and carefully heated in the usual way to 98°. By 1.20 P. M. the acid hairs could be seen by the hot-iron test on the curd from all the lots. At this stage the curd in lot 3 (eight-ounce extract), was firmer and drier than that in lot 2, and much more so than in lot 1. The whey was left on the curds until the hot-iron test showed hairs about three-quarters of an inch long. Then they were dipped into a sink as formerly, after which they were hand-stirred and kept from matting. By 2.30 P. M. they were mellow enough and sour enough for the application of salt. Salt was applied at the rate of two and one-half pounds per 1,000 pounds of milk. The lots were put to press at the same time and otherwise similarly treated.

August 3.

	Pounds.
Lot 1, three-ounce extract, weighed from the hoops.....	179 $\frac{1}{2}$
Lot 2, five-ounce extract, weighed from the hoops	180 $\frac{1}{2}$
Lot 3, eight-ounce extract, weighed from the hoops.....	177 $\frac{1}{2}$

September 14.

	Pounds.
Lot 1, three-ounce extract, weighed	172 $\frac{1}{4}$
Lot 2, five-ounce extract, weighed	173 $\frac{3}{4}$
Lot 3, eight-ounce extract, weighed	171 $\frac{1}{2}$

On August twenty-eighth, the qualities were examined. All three lots were rather rank in flavor and somewhat raw in body and texture.

On September fourth, there was appreciable difference in flavor of lot 3 (eight-ounce extract), which had better flavor and firmer body than the other lots.

On December thirtieth, lot 3 (eight-ounce extract), was decidedly the best cheese; and lot 2 (five-ounce extract), was not much better than lot 1; while lot 1 (three-ounce extract), was quite inferior in flavor, body, texture, color and appearance.

On January eighth they were again examined, and on January thirteenth, by a committee of experts appointed by the dairymen's association. Both of these comparisons showed an increasing difference in favor of lot 3 (eight-ounce extract), which was even then a passably good cheese. All three lots were quite inferior to the three lots from which the whey had been drawn comparatively sweet. The cheese of the three lots

of both days make were treated precisely alike, except as to the quantities of rennet extract added. The three lots made on July thirtieth, and from which the whey was drawn sweet, were all in excellent condition on January thirteenth. On the same date, the cheese made August second (when the acid was allowed to develop before the drawing of the whey) from the use of the unusual quantity of eight ounces of rennet extract per 1,000 pounds of milk were in good condition, while the other lots in which there had been used five ounces and three ounces per 1,000 pounds, respectively, were off in flavor, and in every way inferior.

The lesson taught by these facts seems to be that the quantity of rennet added for coagulation of the milk has less effect on the keeping qualities and curing of the cheese than has the condition of the curd as to its dryness and firmness, or softness and moistness, while the acid is developing. The early removal of whey from the curd favors its speedy separation out of the particles of curd in the proper degree.

Dairy Commissioner BROWN.—Mr. President, ladies and gentlemen: There will be no dispute, among the dairymen who are present, about the magnitude or the importance of the subject, under consideration at this session. It is altogether probable that no paper more valuable will be read or presented, than that to which we have just listened. As Dairy Commissioner, under the statue, I have employed the most expert cheese-makers that I could procure. These men have been practical cheese-makers, and their knowledge of cheese-making has been confined to what they have learned by experience, conforming as far as possible to scientific methods. But I have learned that it is of vast importance in the attempt to carry out the purposes of these enactments that scientific men and chemists should be employed in the effort to improve the methods of making cheese. I have been so much impressed with that that I have directed our department chemist at Albany to go with our expert cheese-makers and aid them in their efforts toward improvement in cheese-making. This is a subject in which I have more interest than in any other, and one that is of great interest and advantage to every dairyman in the State. I hope this subject will be fully discussed after all the papers shall have been read treating on the subject of cheese-making.

CHEESE-MAKING.

[By HARVEY W. RICHARDSON, of East Aurora, N. Y.]

The invitation extended to me by your honorable secretary, soliciting an article on cheese-making, was accepted with a great deal of reluctance. But having undertaken the task, I beg your indulgence, and ask that you do not expect a scientific discussion, for that would be out of my province.

The magnitude of the dairy interest of New York State representing as it does, the leading agricultural industry of the State, merits a deal of study and investigation; therefore the importance of gatherings like this. Cheese being perhaps the most important branch of the dairy in this State, and the fact that cheese is mostly made in factories where the product of the herds of an entire neighborhood is usually placed in the hands of one man to manipulate, enables the cheese manufacturer to wield a great influence for or against the prosperity of the farmers, and he should thoroughly understand his occupation, as well as possess and merit the confidence of the community.

How well this influence has been used, and how wisely these responsibilities have been borne heretofore, seem a proper subject for discussion before this dairymen's association, for the purpose of bringing more plainly to view the shoals and quicksands of error, as well as the beacon-light of improvements. We suppose we are expected to say something about the process of making cheese, but when we consider how ably this subject has heretofore been discussed by the late Professor Arnold and others, in years past, and to-day by the gentlemen preceding us, we fear you will be disappointed in what we shall have to say, for we shall simply relate a little of our experience and observation.

The varied conditions of milk, atmosphere and surrounding circumstances, will allow of no inflexible rule for the cheese-maker's guide. If so, why squander money upon high-priced workmen. If the same procedure would always produce the same results in cheese-making, regardless of the condition of the milk, any good careful person, with the aid of a manual (in which could be given certain fixed rules) could make the finest quality of cheese, by simply following out the rules so laid down for him.

Nevertheless, we believe it possible to formulate a system of directions and rules, which would be a valuable assistant in the hands of experienced men, who would use proper judgment and make proper allowances in their execution. But such a manual, to be of value, must necessarily enter extensively and elaborately into details. Different manufacturers would no doubt entertain different views as to what methods are most desirable, and what would accomplish the best results; or in other words, covering the distance from milk to cheese, different makers would travel different routes. But there is one point upon which I will venture to assert, all cheese-makers will be united; and that is this: The purer, the cleaner, and the better the condition of the milk, the better and more desirable the quality of cheese that can be produced therefrom.

Therefore, while the responsibilities devolving upon the cheese-maker are numerous and arduous, and while we believe that their enumeration would legitimately include that of looking after the delivery of the milk, and requiring each patron to deliver the product of his dairy to the factory in good and proper condition for cheese-making, this would by no means excuse the patron from his full share of responsibility in the premises. We are aware that the farmer's mind is necessarily crowded with very many subjects pertaining to his vocation, and he can not be expected to make care of milk as much a study as the cheese manufacturer, but he can and should see and know that only the most wholesome food and pure water, and these in abundance, be furnished his dairy stock. The farmer should see that his milk comes in contact with no foul odors during milking time, or at any time thereafter. He should know that all utensils coming in contact with his milk are well coated with tin, free from rust and thoroughly cleansed each day. The farmer should see that his milk is stirred and aerated thoroughly, and in warm weather cooled down to the temperature of the atmosphere immediately after it is milked. And the cheese-maker should insist and know that the farmer not only knows all these and many other things pertaining to the care of milk, but that he execute them as well.

The distribution of circulars, detailing the various points of milk, could, no doubt, be made valuable as educators; for we are of the opinion that the intentions of most patrons are all right, but that much of the bad milk delivered to cheese factories comes

from a lack of knowledge and proper consideration, together, we are sorry to say, with a good deal of carelessness. We dwell upon this subject, for we believe that the dairy farmers can find but few places where they can invest a little more time and get as good returns for the time so invested as in the care of their milk. Remember, that when the dairymen furnish the factorymen with good milk, delivered in good condition, he can then justly hold the cheese-maker responsible if the finest cheese in the country is not produced.

And right here let me mention one or two errors that our dairymen have been making in many sections of the State. Too often has the remuneration of the cheese-maker been scaled down from year to year, until the best and most successful makers have been driven from the business, and sought employment in other vocations and cheaper help substituted; and in many cases a new factory has sprung up in such close proximity to others that the supply of milk to each must necessarily be small, debarring the idea of obtaining the best help in either. This is poor economy. When you get a good maker, scale his wages up, if necessary, to a point at least where he can afford to stay and do good work. And where factories are located within reasonable distance, do not ruin these by building others where they are not needed.

For convenience in illustrating our general mode of manufacturing cheese, we will consider the ground covered by the process, extending, from the time of introducing the rennet, to the time of putting the curd to press, under four subdivisions or stages:

First. Stage 1 covers the time from introducing the rennet to time of cutting the curd.

Second. Stage 2, from time of cutting the curd until the highest point of temperature is reached.

Third. Stage 3, from the time the highest temperature is reached to the time of drawing the whey and dipping the curd.

Fourth. Stage 4 covers the time of manipulating the curd in the sink, preparatory to putting to press.

First. Stage 1 commences with the milk at the proper temperature, 82 to 84 degrees, Fahrenheit, for introducing the rennet, where it should have been raised with a gradual heat, the milk having been stirred sufficiently to prevent portions of it coming too long in contact with the overheated tin. A sufficient quantity of rennet is introduced to coagulate the milk in forty-five or fifty

minutes. The rennet should be incorporated and distributed through the milk by constant stirring for five to eight minutes, when the vat should be covered until ready for the knife. The exact time for cutting the curd is as soon as it will break clean over the fingers. Two makers will give the same definition or description of the time at which they would introduce the knife, and yet by observation we would find several minutes difference in the time these two makers would actually commence cutting. And if, thereafter, the management was the same, we would see two different kind of cheese as the result. Thus the necessity for close observation and careful attention. If the curd is cut too soon it will mangle, and a loss in quality and quantity be sustained. While, upon the other hand, if the curd is allowed to stand too long and come too hard, the tendency is toward a damp, mushy cheese.

Second. In stage 2, commencing immediately after cutting, stir the mass gently for fifteen minutes. Then turn on the heat, gradually raising the temperature to ninety degrees in forty minutes, and to ninety-eight degrees in thirty minutes more. A continual gentle agitation should be kept up, until the curd has so hardened as to prevent adhering together readily, and thereafter at intervals, so as not to allow the particles of curd to pack together on the bottom of the vat.

Third. During stage 3, covering a period from the time the highest temperature is reached, until the curd is ready to dip, the vat should be covered, except while the curd is being stirred, and the temperature should be held right up to the point at which you are to scald, say ninety-eight degrees for common, with such variations as may become necessary to suit the varied circumstances. For instance, if the milk is shallow in the vat, a little higher heat is required to overcome the lack of pressure of whey, all things else being equal, in order to produce the same firmness of curd. And if the milk is over acid and working too fast, a hurried heating and increased temperature is necessary. At no time during the stage 3, should the curd be allowed to stand long enough to become united so but that the particles will float out separately when stirring is commenced. And at no time during the entire process should the curds be handled roughly, so as to break or mangle. But when the curd is ready to go into the sink, each particle should have retained the shape into which it was

originally cut; each particle separate from any other, or as near so as possible. We understand that this requires careful work, and is laborious, but we believe the fine texture of the product will repay all this extra trouble and pains. The time of drawing the whey and dipping the curd is determined by the hot iron test, so familiar to all cheese-makers that I shall not attempt to describe it, but will simply remark that we would develop a pretty full acid in the whey, more so than is common, where a grinder is used. We would prefer to have stage 3 cover a space of two and a half to three hours time, but this will depend upon the ripeness of the milk at the time the rennet is introduced. Where the milk is very sweet, so as to extend the space of time covered by stage 3 over a space of four to five or six hours, as is sometimes the case, results are not likely to be so satisfactory, therefore we would recommend the ripening of the milk at such times. This may be accomplished by heating early to eighty-six or ninety, and waiting as may seem necessary, for the milk to cool back and lactic acid to develop before introducing the rennet. The use of a little sour milk is sometimes resorted to for the purpose of hastening the lactic acid, or ripening the mass, instead of warming and waiting as heretofore mentioned, and when judiciously managed, is many times advantageous; but do not make the mistake of the patient who took several prescriptions of medicine at once, upon the theory that if a little is good, more would be better.

Educate your patrons to assist you in this matter of tempering the milk. Very many of them, no doubt, think they are doing the cheese-makers a great kindness by cooling the milk to such a point that it is practically fresh and new in morning as at night, when drawn from the cow. This is a mistaken idea, which has been allowed to continue by very many makers not courageous enough to take the patrons into their confidence. Try and have a better understanding with your patrons; teach them to aerate more and cool less, and in very cool nights, spring and fall weather, a proper housing of the milk cans at night is an improvement. It is much more difficult to secure the requisite amount of body in cheese for standing hot weather when the milk is so very sweet, than it is when the milk is properly ripened. Here is presented to my mind a field for some inventive genius who will be able to study out and give the manufacturer some simple system, meter,

or guide, whereby the actual state of the milk as regards ripeness can be quickly and accurately ascertained, so that we can know just how long stage 3, in cheese-making, will require at the time the rennet is introduced.

Fourth. Stage 4 covers the time of manipulating the curd in the sink, where it is dipped, as soon as the requisite amount of acid has developed. Here the mass is stirred briskly, and the curd kept loose till drained of the whey, say five to fifteen minutes, when the requisite amount of salt is mixed with the curd. Stirring is continued at intervals till the curd has become thoroughly oxidized and ready to go to press. We use no curd mills or grinders. Stage 4 should occupy two or three hours time ordinarily, and double this time in extreme cases of fermentation. Press in the usual manner, commencing with a light pressure, gradually increasing to a very heavy pressure. Press twenty-four hours at least, and double this time would be better. An increased amount of rennet will hasten the curing and at the expense of the keeping quality. Light salting tends to quicken curing, heavy salting tends to dry and preserve the cheese. Our range for salting is two and one-fourth to three pounds for 1,000 pounds of milk.

We have endeavored, in a general way, to outline our method of cheese-making, but, as we stated at the outset, no general rule will fit all cases. Different degrees of variation from this in the various stages are requisite in order to harmonize the method with differing conditions and circumstances. We know that in this hurried description of our method we have not done justice to the subject, but as our method is the old one, we suppose a great deal of the ground over which we have gone is familiar, in a general way, to all cheese-makers; and that persons who are not manipulators of the curd can hardly interest themselves in these dry details. Our object, however, was to illustrate two or three points which we deemed important, as well as to impress upon the minds of cheese-makers the importance of exactness and care in this work. Neither do we hold up our system as the best system of cheese manufacture. It is simply the system we are most familiar with, and under which we have been reasonably successful. We are of the opinion that an improvement in the general character of our State cheese could be effected by the introduction of a system of general superintendence, whereby

one competent man, having had the requisite training and experience, could visit a certain line of factories at intervals of a few days. Such a superintendent must necessarily be a judge of green cheese, so as to be able to decide from testing and examining upon the shelves what the product would be when cured. And in case they were faulty, he should be able to point out the causes and suggest a remedy. This system has been in successful operation for several years among the combinations of Western New York, and it would seem that some method could and should be devised whereby it could be more generally utilized throughout the State.

Closely allied and associated with the subject of cheese manufacture, it seems fit and proper to consider the subject of markets for the product. For if we would increase the demand for any article, we must study the tastes and requirements of the consumer.

Cheese is no exception to this general rule. And right here is where one difficulty now confronts the manufacturer. That is the fact that he can not at all times know his market in advance, thereby being the better able to fit the goods to the market. The consumer wants good cheese. This means full cream, clean and nutty flavor, close and meaty, with a fine silky texture, well cured and buttering down nicely under pressure. But markets are not all agreed upon some other points of quality; for instance, in regard to the amount of moisture cheese should contain.

The range extends from the solid shipping cheese that will carry safely in boxes for long periods in warm weather, retaining its fine flavor and texture, to the old-fashioned dairy cheese, or something akin thereto, which some American consumers still ask for. But the major portion of American consumers are now educated, or are fast becoming so, to the use of what might be termed a medium cheese, in which is retained only a medium amount of moisture.

I believe, sir, that if our cheese manufacturers are wise, they will study more faithfully home markets, and when that is done, this medium grade of cheese will cover the bulk of our production. And I predict that the time is not far distant when exportation of cheese from this country will practically cease. When the current market rates prevailing with us will no longer

be governed by and dependent upon London and Liverpool quotations.

Our surplus has heretofore found an outlet there, but signs indicate to me that this state of things is not to continue, for, in my opinion, we shall soon have no surplus.

During the past autumn, for instance, American consumers have demanded and selected the best cheese, paying the highest prices, and taking the bulk of the stock. We are becoming each year more and more independent of export markets.

As an illustration, allow me to give a few figures. The census of 1880 gives our annual production of cheese as 250,000,000 pounds, and the exportation was then upwards of 100,000,000, or over forty per cent of the production. Now our annual production is about 400,000,000 pounds, and the exportation 80,000,000, or twenty per cent of the production. This percentage of decrease would, in a few years, wipe out exportation altogether. But this is not the only indication we observe confirming our statement. The fact that home trade has been paying higher prices for cheese, and taking the best grades, corroborates our position, and assures us of a continued increase in consumption. This shows a reverse of the conditions confronting us only a few years since, when the exports took the cream of the stock, and the refuse of flavored and skimmed trash was considered good enough for home trade. Here is a hint that our dairymen and cheese manufacturers should not fail to turn to good account. The matter rests with us, and all we need to do is to throw away the skimmer. Make nothing but good full-cream cheese, of styles and sizes to suit the trade, and our market is assured. I believe the American dairymen are too sensible to continue to stand in their own light, as many of us have done heretofore, by persisting in skimming. Just as soon as we are independent of foreign markets, prices will range enough higher in this country, to much more than offset the apparent gain by skimming. Comparing production and exportation of all dairy products in the United States, we find the value of the annual production of the butter, cheese and milk, amounts to \$380,000,000, while the value of exportations of the same, amounts to only \$9,800,000, or a little more than two and one-half per cent. Or in other words, the exportation of dairy products amounts to one-fortieth part of the production. Are we afraid to undertake to handle this additional two and one-half per cent at

home? I would suggest, gentlemen, that we force England to draw upon Canada, New Zealand and Australia, for her cheap cheese, as she seems more and more inclined to do each year, by making our product so much better, that there will not be enough to supply home demands.

As to this matter of surplus, we are aware that a little surplus funds in the United States treasury has been the cause of a great deal of commotion during the summer and fall just past, but I do not believe our surplus cheese ought to cause us very much trouble. I am firm in the belief that we can dispose of it without the aid of the exporter. An increase in consumption of a little more than one pound per capita, is all that is needed to accomplish the work, and use up the 80,000,000 pounds, representing our present surplus.

While we admit that reforms are necessary and in order, we protest under the present circumstances against the claim of the English exporter, that the general character of New York State cheese is not equal to that of our neighbors across the lake. We do not claim to be fully conversant with Canadian cheese, but it is a noted fact, that a large proportion of the cheese exported from New York of late, has been underpriced, and consequently, not of the highest quality. Skims have been substituted in place of full creams, and quite likely not branded as skims either. This is the class of cheese the English have had to compare with Canadian full creams. Cheap cheese, something a little underpriced being sought for by the shipper, seems to have become stereotyped in New York markets. Is it any wonder then that comparison is not more favorable? Our remedy lies in not making the cheap cheese. We believe the country would be ever so much better off without it. We are in favor of national legislation, requiring all skim cheese to be branded as such, and sold for what they are, hoping thereby to greatly diminish, if not entirely wipe out this class of goods. We very much doubt the propriety of a State law of this kind, unless assurance could be had of the coöperation of the other cheese-producing States by passing similar laws. National legislation is what is needed.

Supposing, for instance, one-fourth part of all the cheese made in this country is skimmed, some more and some less; we will estimate the value of this one-fourth part, as equivalent to one-eighth the money value of the whole product. Now I am going

to assert, that if that one-fourth part was stricken out of existence, the other three-fourths would bring more money than the whole would have done before. If this is true, what stronger argument do we need to induce us to dispense with the skimmer. If more argument is needed, we have it in the increased consumption in the States, since our home-trade merchants have commenced to supply themselves more generally with our best full cream goods. Does some gentlemen ask if such an act can be enforced? To such an one I would point to the able and efficient manner in which oleomargarine has been driven from the State, through the agency of our worthy Dairy Commissioner Brown. Would the enforcement of the branding act require more vigilance and skill than the oleomargarine act? We think not. A gentleman of my acquaintance, a prominent cheese dealer from Western New York recently told me that while visiting in the city of Richmond, Virginia, he made the acquaintance of a grocer who sold considerable quantities of cheese; and that this grocer informed him he had used a great many cheese from a certain well-known and popular factory, located in this State; and that the cheese had been giving excellent satisfaction. He had been very much pleased with them, and had come to think he had struck a bonanza in this particular brand of cheese. But the Virginian went on to relate, that his last purchase of the same brand of cheese was turning out unsatisfactory, and this fact was beginning to shake his confidence in the reliability of the brand. This dealer being fully conversant with the custom of that particular factory, and knowing that at certain seasons it was their custom to make skim cheese, suggested to the Virginian that it might be the grounds for his complaint. And upon examination this supposition proved to be correct. Gentlemen of this convention, that one little incident related to me as it was, went a long way toward convincing me of the folly of making skim cheese.

It brought the matter right home to my mind, and illustrated vividly the folly of working seven months of a season to build up a reputation, and then going to work on the eighth to kick it all over by making a few skim cheese, valuable principally for the purpose of deceiving someone. But some will suggest that the injury will not be so much if only a portion of the cream is taken off and that the cheese will then be very fair goods. Probably it will cripple a man less to cut off the extreme end of one finger

than to take off the whole hand, but the sting is there just the same. So it is with partial skimming, it may not injure so much, but we believe it is better to abolish the whole thing. The very cheese that the Richmond grocer complained of, and which shook his confidence in what he had previously pronounced so fine a brand, was what is generally termed half-skims, where the night's milk only had been skimmed. I dwell upon this question of skim cheese, for I believe that in a continuance of its manufacture lies the greatest danger that confronts the cheese industry at the present time. In a great many American families the present annual consumption of cheese amounts to twenty-five pounds per capita, and upwards. This is in case where they are in position to obtain a piece of good cheese at pleasure. Our present population is something like 70,000,000. Supposing we can induce them to use the moderate amount of ten pounds each annually. This would require 700,000,000 pounds, or nearly double our present production. We believe it is not extravagant to assert that the passage and enforcement of a proper branding act would accomplish this increase in an incredible short time. When oleomargarine raised her hydra head and threatened to strike down our dairy interests, the dairyman of New York raised his voice and it was heard. And when the evil was driven from the State we wondered that it had been tolerated as long as it had. Do we not consider this evil of importance enough to deserve our attention? If so, I fear we are laboring under a delusion. Is it too much of an undertaking for the dairymen of this country to try and procure the necessary legislation for self-preservation? I do not believe it.

It is because we are so tender of the interest of the cheese dealer that we are willing to place his apparent gain and prosperity ahead of our own. It is claimed that we can not procure the desired legislation requiring skim cheese to be branded as such, because of the opposition of certain prominent dealers that is to confront us. Possibly so. I have heard it asserted that there is more profit to the dealer on one consignment of Pennsylvania skims, worth one and a half cents per pound, than on five times the same quantity of finest full cream goods. If this is so, it simply goes to show that someone is being deceived, and we believe that someone is the consumer. The stuff he buys has all the semblance of good cheese. Moisture is substituted for butter

and coloring helps keep up the delusion. But after the cheese has been cut a day or two, the moisture has evaporated, the stuff is unpalatable, and that consumer waits a long time before investing again in cheese. While the dealer makes five times the profit he ought on one cheese, it is five times as long as it ought to be before he is ready to cut another, and he finally comes to the conclusion that the cheese trade is no good anyway, and drops it, all because of this deception.

I believe that every dealer ought to be with us, and those who are not, labor under a misapprehension, if they oppose a proper branding act.

Gentlemen of this convention, I do not believe we do our whole duty if we fail to put our shoulder to the wheel and set the ball in motion.

I believe, sir, the time for action has arrived. We ought to discard the idea of a little petty present gain and launch our craft upon the sea of general good.

Let this association resolve itself into a committee of the whole, for the purpose of bringing about this needed legislation and reform, and the American people will say, "'Tis well."

Recess to 2 P. M.

AFTERNOON SESSION.

President SHATTUCK called the convention to order at 2 P. M.

Mr. FENNER.—What is the cause of white specks in butter?

President SHATTUCK.—If cream is set where it becomes dry, either by the wind blowing on it or from the heat of a stove, or in very hot weather when the milk stands until it wheys, the curd will become so hard in it that if you get it in the cream it will pass into the butter.

Mr. FENNER.—Can as good cheese be made at the factory by delivering the milk once a day as by delivering it twice, if the milk is properly aired?

Mr. RICHARDSON.—In regard to that matter I have had experience with twenty-five cheese factories for about fifteen years. I have found it more satisfactory to deliver milk to the factory once a day than twice. There will be more or less tainted milk. It is very difficult to detect it when it is new and fresh, but if kept and delivered in the morning the taint is discoverable and can be rejected. And if it should get into the vat it does not develop and injure the cheese as much as if it stood in the mass of milk over night.

Mr. FENNER.—Does the regular salting of cows make any difference in the product?

Professor ROBERTSON.—I have made some experiments in that line and I have found that if cows are not salted regularly they lose fourteen to fifteen per cent in quantity of milk and in churning the cream from such milk it takes about one-third longer time to churn the milk of cows which have been deprived of salt than those which have had free access to it, and thereby cause a great loss to dairymen.

Mr. GILBERT.—I find my cows do much better where there is salt constantly before them, and I find a great difference in the churning of the cream, and the product is better.

Mr. FENNER.—What is the best way of cooling milk and how cool should the farmer make it?

Mr. MORGAN.—My experience has been that the milk should be occasionally and carefully stirred. I do not think the odor escapes so well in any other way as it does by dipping.

Mr. GILBERT.—By using an implement in form of a lamp shade and passing it down through the milk, the milk is forced up from the bottom, and by that means you can aerate it in a few minutes.

Mr. W. W. HALL, Gouverneur, N. Y.—Mr. President: The only way in which success in cheese-making can be reached and a good quality of cheese be made is with pure milk. To produce pure milk the cows must be healthy, and furnished an abundance of good and nutritious food, with an abundant supply of pure water, and have free access to salt at all times. Fine cheese and that which will command the highest price can only be made by farmers furnishing pure, sweet, unadulterated milk. If cows are allowed to drink from stagnant pools containing decayed vegetable or animal matter, it is cause for impure milk and floating curds.

Then stables where cows are kept and milked must be kept clean and free from any objectionable odor, and the milk strained and cooled down to the temperature of the surrounding atmosphere. The milk immediately after being drawn from the cow should be deodorized by dipping or with some apparatus where the milk can pass through pure air. Under no condition should warm milk be covered tight in cans, or decomposition will set in and the milk become tainted and unfit to make a prime and desirable cheese. Great care must be taken in keeping milking pails and cans clean and free from rust, or any holes or places where any deposit shall gather.

Any excitement of the cows should be avoided, such as chasing with dogs or otherwise. Excitement and worry causes heating of the blood, thus producing unhealthy or impure milk, and will not make good cheese. The most scrupulous watchfulness and care, and cleanliness should be observed in milking, cooling and deodorizing the milk, and delivering it to the factory in sweet and pure condition, if dairymen expect to obtain the best product and the highest price for their cheese.

MAKING CHEESE.

After the milk is properly ripened, heat it to 82° in the summer, and 84° in the spring and fall during cool weather. After the the proper heat is attained add the rennet in quantity to coagulate milk in from 50 to 60 minutes. Then cut the curd in cubes of about three-eighths of an inch each, then stir gently ten to fifteen minutes, then apply heat slowly at first, and raise the heat to from 90° to 92° when the heat can be raised rapidly to 98°, when the whey can be drawn. Then stir the curd gently until it begins to pack. When sufficient acid is developed in the curd and cooled down to 85°, grind and salt about two and a half pounds of salt to 1,000 pounds milk. Then the curd is put to press. Apply the pressure gradually until the whey is pressed out. The cheese should be in press about twenty-four hours. The curing-room should be of a uniform temperature of about 70°. After cheese is properly cured, if not marketed, it should be placed in a cool room so the curing process will be retarded.

The Chair announced an address:

THE RELATION BETWEEN FACTORYMEN AND PATRONS.

[By Mr. F. W. EDMUNDS, of Sherman, N. Y.]

Mr. President: The system of coöperative dairying, as now practiced, necessarily places the products of the dairies represented in the factory in the hands of the factoryman. Here the responsibility of the patron ceases and that of the factoryman begins. We wish to impress upon the patron this one fact: With him and upon him largely rests the success or failure of the factory. The factoryman is only a hired servant. When he loses interest in the welfare of his employers, he is unfitted for the

position he occupies, and in justice to himself and the business he represents, it is his duty to step down and out. When our farmers become convinced that success in dairying, if not in the entire system of agriculture, depends, in the main, upon united, systematic effort on their part, each and all working for one general result, regardless of individual or personal motives, then, and only then, can we assure to each his just rewards, and satisfactory returns from the factory. Let each patron become thoroughly impressed with the idea that upon him rests the success or failure of his factory, and you have in him an ideal patron; one who seeks to deliver good milk to the factory, and expects each of his associates to do the same. With such patrons as these, if the factoryman is a man of ability and honor, we will guarantee the business a success. Thirty, forty or fifty farmers, by common consent, become the patrons of a factory. Each seems wrapped up in the one idea of seeing how much he can get in returns from the factory.

To arrive at the facts of the case, let us begin at the very bottom. The common patron of to-day has a herd of cows, not selected by experience and judgment; some of the rejections of larger herds and some grown by himself from inferior animals without regard to either milking or butter qualities. Equipped with such a dairy, we find his stable a poor excuse for home during the winter months. His cows are allowed to be out of doors during the cold winter days, and are supplied with ice-cold water; their systems are chilled, and only harm can result. Their food consists of what he has managed to gather in from his farm, managed in the same hit-and-miss fashion. He seems to have no idea of proper and well-balanced rations for milch cows during the fall and winter months. He wonders why his cows, fed all the good hay they want, give so little milk, while a neighbor, feeding his hay with roots and corn fodder, has milk enough to make it profitable to continue winter butter-making, while he is forced to dry off his cows. In many instances I have found farmers feeding straw and corn meal, and growl because their cows run down on such food. As spring approaches, he finds that his cows have averaged him only about twenty-four dollars per head in returns from the factory. Some of his bills run over and are unpaid. He is in no mood to be liberal and plan for his own or his neighbor's welfare. About this time the annual factory meet-

ing takes place to fix the price of making, and to elect officers. The first thing in order is a report of last year's business, by the proprietor or secretary of the factory, which runs about as follows:

REPORT OF COLD SPRING FACTORY FOR 1888.

Factory opened April fifteenth, closed October fifteenth.

	Pounds.
Total amount of milk received	754,200
Total amount of cheese made	72,800
Amount of milk for one pound cheese	10½

Average price for one pound of cheese, nine and three-eighths cents.

Gross proceeds from sales	\$6,825 00
Paid for making, \$1.10 per 100 pounds cured cheese	800 80
Amount paid patrons	\$6,024 26
Net value 100 pounds to patrons for six months	80
Total number cows	250

Average amount milk per cow, 3,017 pounds.

Here our farmer friend jumps up and makes a motion to reduce the price of making to one dollar per hundred for the coming season, using as an argument that the factoryman has only about \$1,000 invested in his business; he's been paid over \$800, while he, with twenty cows worth \$600, a farm of 140 acres that cost him \$5,200, horses and farming implements worth \$700, total capital invested, \$6,500, only secures for six months milk from the factory \$480. Out of this he must pay the hired man, taxes, store accounts and interest. This argument is a clincher, and the other patrons think that a reduction in making not only proper but necessary. Any good cheese-maker, working less than six months in a year at his business, ought to command a salary of fifty dollars per month of thirty days. A man not able to earn this salary is not a proper person to have charge of a factory and working the milk of 250 cows.

We will now investigate the factoryman's account. The books show that he was paid \$800.80 :

For six months work, at \$50 per month	\$300 00
For paid second hand three months, \$25 per month	75 00
For supplies, at thirty cents per hundred	218 00
For fuel	37 00

For interest.....	\$60 00
For insurance and taxes.....	14 40
For use of machinery, at ten per cent.....	72 80
Total expenses	<u>\$777 20</u>
Balance at credit of factory.....	<u><u>\$23 60</u></u>

The ten cents per hundred reduction would make him a loss or cut his wages down below what he could get working out by the month as a cheese-maker. If the ten cents per hundred reduction proposed is equally divided among patrons representing 250 cows, our friend would receive five dollars and eighty-two cents as his portion. Will this sum make dairying profitable to him? The figures I am giving are facts taken from my own experience.

Bear with me, if you please, and we will see if we can devise some plan wherein this patron can make his business more profitable. Our first work is to lift him out of the old rut and set him on a higher and broader plain.

First, let him provide warm, roomy and ventilated stables for his cows during the winter season. Provide a food supply, that he may not only have an abundance, but a variety that will enable him to make up a well-balanced ration during the time he keeps them up. Let him use a water heater and not allow his cattle to drink water in cold weather that has not had the chill taken off. With these hints let us proceed. Let our friend, who was so ready to reduce the price for the making of his cheese, increase his number of cows to twenty-five. It is supposed that he has been feeding some grain, as is usually done by this class of farmers. To this amount add \$200 worth of good wheat bran and cottonseed meal, and feed during the milking season. From a thorough investigation of the farmers of my own town, who are practicing this system, I find that he may expect to produce from each of the twenty-five cows, for the six months, 5,000 pounds of milk. At eighty cents per hundred, the income from the twenty-five cows will be forty dollars each, or \$1,000 in all. Deducting the cost of the bran and meal and we have \$800 to compare with the \$480 received from the twenty cows under the old system, giving him an increased income of \$320 from the factory alone. We have here shown how he gained \$320. He will now feel more liberal towards the factoryman, and not ask for the five dollars and eighty-two cents reduction in making his cheese.

The factoryman now comes in for his portion of the gain. Where he formerly received sixty-three dollars and eighty-two cents, during the season of six months, he now receives \$132.97 for making. If all the patrons would follow the example of this now progressive one, the factoryman would be obliged to enlarge his factory, and, instead of working for a mere living, would have an income in keeping with his ability and capital involved. The coming patron will be the one of ideas, of thought and investigation. He will study the breeds of cows best adapted to butter and cheese-making. He will aim to produce milk rich in fats as well as quantity. He will not send filthy or diseased milk to the factory. He will be interested in the success of the factory in whatever it may be, whether in the manufacture of fine butter and cheese, or the marketing of the same.

How about the factoryman? He, too, must receive consideration. No man is worthy of patronage who is not moral and honest, and possessed of integrity and skill. I do not believe a cheese-maker can lift his patrons to a higher plane than that on which he stands himself. He should work for the welfare of his patrons, remembering that success of patrons means success for himself. If they are doing well they will be willing to pay him well. Take a factory of thirty patrons, twenty-nine of whom are cleanly about milking, and aerate and cool their milk, and deliver it pure and sweet, would, when made into butter or cheese, be fine and command the highest market price.

The one, we will suppose, is a man void of principle, and works on the plan of getting all he can, even if his associates lose tenfold. He uses the milk from a sick cow because he can not see the harm of putting this milk in with good milk, so in it goes, and he delivers it to the factory, but too late the cheese-maker discovers something wrong. The entire product is injured. I have in mind an incident that occurred at home the past season. The cheese-maker was getting fine cheese. All at once he detected something wrong. We investigated the matter by going to the dairy barn of the patrons. At last we found a man who had a sick cow. He had been sending her milk. The result was loss of ninety-six dollars in two weeks. When this cow's milk was kept out the trouble ended.

We have careless cheese-makers. I know of a cheese-maker who did not clean his whey vat, and farmers taking the whey home

in the cans, and then delivering milk to the factory, which was the cause of injuring the value of the cheese so that it had to be sold for one cent per pound less than the market price. The proprietor investigated the matter and found the trouble in the whey vat. When the vat was thoroughly cleaned the trouble ceased. No amount of washing the cans could take out the bad effect of the sour whey. As milk was delivered only in the morning, it was necessary to keep the night's milk in the cans from twelve to fourteen hours. Let the factorymen endeavor to have their patrons use the methods of keeping cows to increase the quantity and quality of milk, thereby the factorymen will have more milk to make up and the farmers will increase their income. Study the most modern improvements and interest your patrons in them.

To the younger factorymen and cheese-makers let me add: Your calling is an honorable one and worthy of your best thought. Remember that at the foot of the ladder there is a crowd, but at the top there is room for more; take our advice and get out of the crowd.

Commissioner BROWN.—Mr. President, Ladies and Gentlemen: The Department of the State Dairy Commission has been in existence between four and five years, and, after the tremendous controversy which has taken place between the department and the manufacturers of bogus and imitation butter, it is a great comfort to the Dairy Commissioner, as well as to others, that he is able to say to you that to-day there is no oleomargarine made in the State of New York. There is comparatively very little of it sold in the State. Occasionally there is a person who takes the chances of incurring the penalties which a violation of this law imposes upon him, and will, in a clandestine way obtain bogus butter and find a customer for it. We have been able to perfect our organization in the State to the extent that there is now some person connected with this department in different localities with whom persons can confer, and to whom information can be given, so that it is exceedingly difficult for the vendors of these goods to carry on their unlawful business to any considerable extent before it is discovered, and when discovered we have no difficulty in bringing them speedily to justice, and to be punished according to the provisions and terms of the statute.

It is true that the manufacture of oleomargarine and oleo oil is still going on to a considerable extent, yet I believe it is not to so large an extent as it has been during the history of this business. This fact is due to the vigilant, untiring and successful efforts that have been made by dairymen and friends of the dairy interest in securing federal enactments; and in the several States, of securing statutes against the manufacture and sale of these goods. There would be less sold if some of our friends in other States would make provision for some officer whose duty it should be to properly enforce the laws. In the State of New York, the dairymen, through their representatives in the Legislature, have been among the very first and foremost and the most persistent of any people in this country in seeing that the proper enactments were made, and suitable provision made for their enforcement. In my opinion much of the credit is due to the dairymen of the State of New York in securing the enactments for the prevention of the sale and manufacture of these goods in this country. If it had not been for the organization which we have in our State, large quantities of these goods would be upon our markets to-day, and our dairy products would be struggling to maintain this unequal contest with these spurious and imitation articles of food.

In the building up of this department, as in that of any other, it has been found that men to whom were assigned certain duties would make failures, but we are endeavoring to put men in places where they can do the most service. The results of the work of this department are so striking and of so much importance to the dairyman, and to others, that they are worthy of mention in this connection, and at this convention. The New York State Dairymen's Association, from first to last, has always been the fast friend and persistent supporter of every move that the Dairy Commissioner has made in the attempt to discharge the duties of his office.

When we began to inspect the contents of milk-cans under the auspices of our department, large quantities of milk were found to be shipped to the cities for consumption that were considerably below the standard that the Legislature had provided; but as the work has gone on the quality of the milk has increased in purity to that extent that the product of our dairies to-day is the purest article of food in the city of New York. Whatever may be said, it is true that this great article of food is the purest offered to the

consumers in this State ; and this result has been largely brought about by the system of inspection under the provisions of law, by which it has been possible for the Department of the Dairy Commissioner to carry on.

Wherever we have succeeded in satisfying the consumer that the article furnished by the dairymen of this State was safe and wholesome as an article of food, to just that extent has the demand for that article increased. The natural result has been an increased demand for it until to-day they are shipping milk from as far away as Oneida county to the city of New York. Whatever is true as to the milk product is equally true as to every other product of the dairy. There will be next to no limit to the demand for our butter and cheese when it is all really fine. It is to the interest of every dairyman in the State that the product of our dairy farmers be good, perfect, pure, wholesome and acceptable to the consumer.

During the administration of the affairs of this department it has been my purpose to practically cover the dairy counties of the State, with a view of inspecting the milk, not only that which goes into immediate consumption as such, but the milk that is furnished to cheese factories and creameries ; to present some conclusions which would be of service to dairymen, and to strengthen the confidence of the consumer in the purity and wholesomeness, and worth of the dairy products as articles of food. Every lack of duty which is suffered anywhere, has a tendency to weaken the confidence of the consumer, and is something that the dairymen of this State will very much regret sooner or later. In pursuance of that plan, the agents of this department have, the past summer, for the first time, been able to get anything like a general inspection covering practically the entire State. When we consider the great extent of our territory and the vast amount of property employed in this State, in the dairy business, amounting nearly or quite to four hundred millions of dollars; when we consider the magnitude of this business, and what an undertaking it is to attempt in detail to look after these different interests and different elements, we are proud to say that the result has been reasonably satisfactory to the dairy commissioner, as it doubtless is to the dairymen themselves. We have been able to visit 1,163 cheese factories and creameries, at which were made 8,650,139 pounds of butter, from 216,253,475 pounds of milk; where were made 96,331,788

pounds of cheese, requiring 1,021,116,952 pounds of milk. The entire amount of milk used in the manufacture of cheese and butter was 1,237,370,427 pounds. This milk was produced by 407,810 cows, owned by 30,746 patrons. And now here comes a fact which was very startling to me, and must be to you; the average product of milk per cow was 3,034 pounds.

Now, if any rational man will tell me how it is possible for the dairymen of this State to get any sort of a living out of any such amount of milk, I would like to have them do it. It is useless to find fault with cheese-makers, with politicians, with business men or anybody else, except ourselves, so long as the average crop which the average dairyman of this great State of New York is receiving from his dairy is only 3,034 pounds per cow. It is not possible that any income at any price that can be obtained for cheese or butter, that will meet the reasonable expenses of the average dairy farmer.

These statistics are to cover the factory season. Of course some value of milk is received before the factories open in the spring and after closing in the fall, but taking the entire product, with the best price possibly that the dairyman may get in this State, and it is impossible from any such income to meet the average expenses upon the average farm in this State.

Mortgages will forever increase, and interest running upon them, will continue to increase until foreclosure takes place and the farm is taken away from them. There must be some means adopted to increase the amount of income. There is no use to attempt to disguise the matter; there is no use of saying I am not a scientific farmer; there is no use of finding fault with these things, so long as the statistics show the present condition of the dairy business. And unless some change is made somewhere the dairy industry of this State will prove a lamentable failure. Now, dairymen are interested in the breeding of cattle; scientists have given the result of their investigation on the care and proper feeding of cattle and have endeavored to bring this knowledge to the dairymen of this State, and it is the fault of the dairymen themselves if they continue in the same old rut and their business proves unprofitable and unproductive. I have neighbors whom I see nearly every day that I know are wearing themselves out in a fruitless attempt to stand up against the mortgage on the farm. And the reason why this

is so, is because a large percentage of their dairies are these 3,034 pounds of milk cows. Now let us look these facts fairly in the face, and let us resolve to try the means suggested. Don't say it can not be done. Try these methods and determine for yourselves whether you better quit now or in the future.

I never was so sadly impressed as I have been since these facts came to my knowledge, to know that this grandest and greatest agricultural industry was in such a condition as this. That men who work from four o'clock in the morning until nine o'clock at night on their farms, find it impossible to make money enough to pay the legitimate and ordinary expenses of the family. Now, these are facts covering a territory of forty different counties in the State. Of course, here and there we find progressive farmers, who find the dairy business a profitable as well as a pleasant occupation. I believe that this condition of things can be remedied; that this cloud can be lifted off from the dairy-men of this State, and that relief can come to this great industry, and to the people engaged in it. That the dairy farmers and their families should persistently go on year after year wasting their energies and contending against these conditions that I have referred to, is indeed as lamentable as it is true.

It is entirely clear that the cow that will not give more than 3,034 pounds of milk is not worth keeping on a farm for any purpose. There is no difficulty in bringing the product of milk up to at least 5,000 pounds to a cow; and that is not confined to any special breed of cattle. To illustrate: A while ago we bought a cow that was about three-fourths Jersey, and the gentleman sold her because he said Jersey cows were not good for cheese factory business; that they did not give milk enough. We commenced with our method of feeding and the first year that cow gave between 7,000 and 8,000 pounds of milk. There is not any difficulty in securing profitable cows. It requires no more enterprise than is necessary in the conduct of any other business. If you conduct the dairy business as other business is conducted it will secure you a fair income and profit, and it will not take long to get a herd of cattle that will be a profit and will produce an average of 6,000 pounds of milk to the cow. That is the only thing that is left to be done. All dairymen have carried economy to the very verge; they can not economize further, and the only thing left to do is to increase their income; and it is

easily within the reach of every intelligent dairyman in this State. Have only such cows on the farm as will carry the average product above 5,000 pounds. There are persons engaged in breeding cattle who will tell you of cows producing 30,000 pounds; and it is quite probable to carry it up to 9,000 or 10,000 pounds per cow. Why should dairymen longer waste their time and energies in an attempt to make dairying pay, when out of forty counties in this State, and nearly 1,200 factories, with nearly half a million cows, the average is only 3,034 pounds milk to a cow.

Last winter the Legislature of this State appropriated the sum of \$5,000 to enable the Dairy Commissioner to employ butter and cheese-makers to go among the people to assist them to improve their product. How to carry out this object in the most efficient manner was a thing that caused me much anxiety and concern. Where to begin and what methods should be pursued were questions that came upon me. I selected men for this purpose who had a success in cheese-making, and who had been employed in factories that had received the highest price for their product, and it is gratifying to say that while our effort have not been absolutely successful everywhere, yet they have been fairly so, and we have made fair progress, and it has been a profitable venture in my judgment, and our efforts have been appreciated by the people, especially those whom we have attempted to benefit. While it is very clear that we must depend for a long time upon those who have established a reputation in making good cheese, yet I am satisfied that there must be somewhere about this system a scientific mind, a chemist, a physiologist.

Mr. SUTTON.—I have the idea that 3,000 pounds is no measure of the amount of milk our dairy cows produce. There are many instances where poor men have commenced on a dairy farm and secured a competence. I have succeeded fairly well and I don't know as my cows have exceeded the general average of those represented in the factories that I have patronized.

Mr. G. MERRY.—Mr. President: I have run a factory of about 800 cows for twelve years and never but once in all that time have we averaged over 350 pounds of cheese to the cow.

Mr. EDMUNDS.—In Chautauqua county I know of two farmers whose farms adjoin; one has fifty cows, well cared for in the methods our teachers and workers advise, and his receipts from milk sold and calves raised with skim milk were seventy-six dol-

lars per cow; he produced almost 7,000 pounds of milk per cow. His neighbor had twenty cows and made his butter at home and averaged less than ninety pounds of butter per cow, which, together with his calves, produced only seventeen dollars per cow.

Professor ROBERTS.—I think we are rather at sea in these statements. I would ask every dairyman within the sound of my voice to go home and weigh his milk and come back next year and let us know what we are talking about. We have our thousands of cows, some of which are running us in debt and some not. Nobody knows anything where they are except here and there a man.

Mr. HAYNES.—I can bear out Mr. Brown in this statement. I have a factory of about 900 cows and the general average is only 3,269 pounds for eight months, lacking a week.

Mr. RICHARDSON.—Professor Robertson, what percentage of moisture is retained in cured cheese in Canada?

Professor ROBERTSON.—In our factories it requires 10.54 pounds of milk to make a pound of cheese, and by analysis we find in cheese of the very best quality from thirty-one to thirty-two and one-half per cent of moisture.

Mr. HALL.—Would it not add to the yield if the farmers would take particular care to bring their milk to the factory in a proper condition?

Professor ROBERTSON.—I think it would. The simple aeration of milk would enable us to reduce our average at least half a pound of milk to a pound of cheese, and give a longer keeping and better cheese.

Mr. GREEN.—I would ask Professor Robertson his opinion as to the effects of the excessive use of rennet on the flavor of cheese, and the effect of rennet in digesting cheese beyond the coagulation of the curd.

Professor ROBERTSON.—The use of a large quantity of rennet will increase the amount of moisture in cheese, and thereby provide favorable conditions for rapid curing. The common impression prevailing, that cheese will cure more rapidly when a large amount of rennet is used, is correct, because it will increase the moisture, and thereby the curing fermentation is facilitated. The first action of the rennet is merely to coagulate the casein to make it solid, with a substantial texture as distinguished from its previous state of solution. It expresses the moisture by contraction

of the curd, the same as if you were to squeeze a sponge. Beyond that it will not expel so much moisture as if less rennet was used, but it will hold more moisture, and in the subsequent curing fermentation the extra moisture provides the suitable conditions for the rapid curing. That fermentation renders the coagulated casein again soluble.

Professor ROBERTS.—Is there not a greater per cent of loss in butter fats where cheese is made from very rich milk?

Professor ROBERTSON.—There is a greater loss in the aggregate. The whey from rich milk will have more fat in it, and there is also a greater percentage of loss. That is, you take milk of three and three-fourths per cent fat, which we call very normal milk for cheese milk in the summer season, and you will lose about twenty per cent of that, as a rule, in the whey. In very rich milk you are required to use more rennet, so as to coagulate thoroughly, to get a firm structure if possible, and then when you cut the curd you leave a ruptured surface, and on that surface are little globules of fat. If you take a cubic inch of curd you will have over a thousand millions of these globules of fat, and when you cut the surface of the curd you expose a great many of these, and a great many, therefore, are rubbed off, and if the milk is very rich there will be more rubbed off, and the structure of the curd is not so strong, and you lose more.

Mr. HALL.—I would like to have the professor state what he thinks is the proper care of milk by the farmer where it is kept over night.

Professor ROBERTSON.—First take pains to keep the milk from pollution; aerate it for preservation and properly cool the milk in preparation for the best results in cheese-making, but not below sixty-five degrees. There you have the whole thing in a few words.

Mr. BLANDING.—How much time would you give the milk for ripening for cheese?

Professor ROBERTSON.—I find if milk is kept over night from sixty-five to seventy degrees, and then mixed with new milk, not over three hours old, you have it in the best condition.

Mr. TARBELL.—I would ask the professor if, in a case of tainted curd, he would deem it beneficial to drench it with hot water?

Professor ROBERTSON.—I have not found that many curds are so badly tainted that the very tainted condition will prevent the

development of acid, and the washing with hot water will promote the development of the acid. It will not wash the taint out, but give it such condition that the acid developed will smother or destroy the taint. In that way it may be beneficial.

Mr. RICHARDSON.—At what temperature would you have the water for washing the curd?

Professor ROBERTSON.—In using water I have found it best to heat to 130 degrees, and allow the water to filter through a strainer, and it thereby gives the best condition for making the curd moist, and hot at the same time. Water at ninety-five or ninety-eight degrees is apt to leave a slippery curd.

Mr. McPHERSON.—Mr. Chairman, Ladies and Gentlemen: I have listened to the papers and addresses given and have been very much pleased with the information they have contained, and it is a great pleasure for me to appear before you as a dairyman and coworker in an interest which is so great and so honorable, and of so great interest to our country and its development. Our scientific men have not the practical experience, and our practical men have not the scientific knowledge, hence the two do not go hand in hand. I believe that the true system, and the true way to develop this great industry, is for science and practice to go hand in hand, to overcome the difficulties and make a greater success than in the past. The point referred to by Mr. Hall in regard to the airing of milk is of the greatest importance. It is a fact that animal life is maintained at a temperature of ninety-eight and that a few degrees either above or below creates death. It is a fact, also, derived from experience and scientific observation, that a temperature of ninety-eight in organic substance is the most favorable temperature for decomposition and dissolution. Now, we know that milk comes from the udder of the cow at a temperature of ninety-eight; we know that milk is an organized substance, and is affected by that temperature in the greatest degree for decomposition. We know it to be a fact, by observation, that to preserve milk and reduce the liability to decomposition, it is necessary to either reduce the temperature or to expose the particles of milk to the oxygen, of the air, or both. One will affect it in a certain way and the other to a certain extent. The exposing of the particles of milk minutely to the action of the air preserves it in its flavor, the condition which is essential in the development of good, fine-flavored cheese; and

reducing the temperature to a low degree has the effect of preserving milk sweet and yet not injure the flavors which would develop in the milk in the course of manufacture. It has been found that if you reduce the temperature of milk down to a low degree that you condense those gases which are injurious, and which become incorporated in the milk; if the milk is exposed to the air immediately after being drawn from the udder of the cow, in minute small particles, these gases vaporize and pass off. Where you receive milk once a day it is only necessary to air the milk thoroughly immediately after being taken from the cow. Where the utensils are all properly cleansed, and where the milk is thoroughly aired, I do not advise any of my patrons to cool the milk whatever. It leaves the milk in the best condition for the development of those qualities which we seek to make and develop in our cheese.

Another point permit me to refer to, in regard to the action of rennet. I know it to be a fact that when milk is thoroughly aired it develops a peculiar character of lactic ferment, which has a strong affinity to the action of rennet; and the action of rennet is stronger and more distinct. It takes more effect on the casein, mechanically, as well described by Professor Robertson, and holds the butter globules in the curd, and they are thereby retained to a large extent. Hence the importance of aeration of milk immediately after its being drawn from the cow: First, we secure a finer flavor, and second, we get a stronger action of rennet and thereby retain more butter globules, and third, we have a cheese which will command quite a percentage of advance in the market when being sold.

In regard to the amount of rennet, let me state that the terms large amount of rennet or small amount of rennet are very indefinite. Perhaps the practical cheese-makers present will remember a few years ago a system of cheese-making called the sweet curd system. That term sweet curd was very indefinite, and meant a very little or a great deal. You had no means of measuring the amount of acid or the amount of sweetness in the curd during its manufacture, and hence many errors were made in adopting the system, and so it is with the term large amount of rennet or a small amount of rennet. I think we should be more definite in our terms and give a clearer conception of what we wish to convey when we speak of these matters to practical cheese-makers and

practical men. I find the amount of rennet which gives me the best results, where I have an average quality of milk, is that quantity which will begin to thicken the milk in from eighteen to twenty minutes, and have it ready to cut in from sixty to seventy minutes. I believe a great many cheese-makers injure the keeping quality and the flavor of their cheese by too much rennet, besides the extra expense.

Mr. MUNSON.—I move that a committee of three be appointed to report on dairy implement exhibits. Motion carried, and the chair named as such committee Messrs. Munson, Gilbert and Owen.

Mr. RICHARDSON.—I offer the following resolution :

WHEREAS, One of the greatest hindrances to an increase in the consumption of cheese in this country, and hence danger to prosperous cheese production, lies in the manufacture and sale of skim cheese ; and,

WHEREAS, A large percentage of consumers purchase such cheese, with no previous knowledge of the nature of their purchase, thereby suffering imposition ; therefore,

Resolved, That it is the sense of the New York State Dairymen's Association, that Congress enact a law, with the proper penalties for the infraction thereof, requiring all cheese made from milk from which any portion of the cream has been taken, to be branded "Skim Cheese," and to be sold as such.

Resolved, That all dairy associations and kindred organizations throughout the United States be invited to coöperate with this association in the endeavor to effect such legislation as aforesaid.

Mr. MUNSON.—I move that the resolution be referred to the committee on resolutions. In asking this legislation you discriminate in favor of one branch of dairy industry and against another. We have a State law that enables every man that manufactures full cream cheese to brand it as such, and any cheese that does not bear the brand is supposed to be skimmed.

Mr. EDMUNDS.—The difficulty with skim cheese is that it is sold to the consumer as full cream cheese and thereby the purchaser is defrauded.

Professor ROBERTS.—I take pleasure in seconding this resolution because I like to see things go under their proper name. If I order a few pounds of cheese and it proves to be this contemptible skim cheese, I have no protection whatever. The result is I

do not order any more. Now if my grocer had his cheese branded for just what it is, then I would not be cheated.

Mr. D. B. GILBERT.—This resolution calls for the branding of the cheese of the whole United States ; it seems to me it is a fair and just proposition and ought to receive the hearty indorsement of all.

After further discussion by a number of persons, the resolutions were adopted. One vote in the negative.

Recess till 7.30 P. M.

EVENING SESSION.

President Shattuck called the convention to order at 7.30 P. M.

Mr. FENNER.—Can ensilage be made with whole corn without cutting?

Mr. GILBERT.—I have put up whole ensilage the past two years with success.

Mr. POWELL.—We have put up large silos of whole ensilage for a number of years, but at the same time we have filled several silos with cut corn, and our experience has been that we can keep the ensilage in better condition and that it comes out fresher, and we can handle it better, and like it better cut.

Mr. S. M. COON.—The past summer I built what is called a poor-man's silo. I took half of the bay of my barn and put a partition across with rough hemlock boards and then another course to break the joints, with ninety cents worth of building paper between, and I had some Southern white horse-tooth corn, which we sowed broadcast, which grew so thick there was no ears on it, and I found it would cost a good deal to have the corn cut and put in the silo and I gave directions to my man to put it in whole, and have it tramped down thoroughly on the sides and corners, and covered over about one foot thick with oat straw, and covered with boards and some scantling to hold it in position and make it as compact as possible. A short time ago I opened the silo and found the oat straw that I had placed on top was rotten, that is, the most of it, and a little next to the corn was moldy, but we did not find a single stalk of the corn rotten. I found it was good ensilage.

The chair announced the order, an address on dairy education.

DAIRY EDUCATION.

[By Colonel F. D. CURTIS, of Charlton, N. Y.]

Mr. Chairman, and Ladies and Gentlemen: I am to speak to you to-night on a subject in which I have a profound interest. I have thought about it a good deal, but so far as my address is concerned I must apologize somewhat, by saying that my time has been so fully occupied of late, and I have been so deeply engaged in caring for a sick friend, that I am not as fully prepared upon the subject as I had hoped to be.

In the first place let me state that I have no possible pecuniary interest in this matter, and no interest except as a dairyman and a citizen of the Empire State, who is anxious to promote the welfare of our people. There is no possibility if the plan which I shall propose shall be carried into operation, whereby I can be benefited in any respect, except in common with you in the advancement and welfare of the dairy interests.

So far as I have been able to learn there are no records of any line of education in dairy matters in this State, except for a comparatively few years past. Previous to 1864, our grandfathers and our grandmothers each followed his or her own way according to his or her own judgment, and the knowledge which they possessed was the result of observation, and the education which they received from their parents and from traditions which came down to them from their fathers and mothers. They carried on the dairy business in this State making butter and cheese as best they could, and it is only within a few years that science has come to the rescue of this great interest, and I, in common with you, must pay tribute to the work of science and the efforts of scientific men to advance this interest and improve the quality of our butter and cheese. We have heard evidence here to-day of what benefit knowledge can be in the promotion of this industry, and I think you will all agree with me that in the addresses and remarks that have been made, especially from our friend across the border, we must be convinced of the importance of education in connection with the dairy, and the great benefit which lies in a scientific knowledge and skill in the care of milk and the art of butter and cheese-making. Knowledge is power and of great importance to the people of this State in connection with this great dairy interest; and it is especially important when we

reflect that we must meet with competition in this industry in other States, and especially with our friends across the border, where a superior quality of dairy goods is being produced by the intelligent men and women, who have been educated in their profession. The great need in New York is more education in connection with the dairy.

In the notes to which I shall refer this evening I am indebted to that old worker in the dairy interests of this State, Mr. T. D. Curtis, whom many of you know personally, who left our State a few years ago, and who is now the editor of the *Prairie Farmer*, in the city of Chicago; and I am also largely indebted to that veteran worker who unites two or three decades in the dairy history of this State—I allude to the honorable secretary of this association. I am also indebted to Mr. James Long, professor of agriculture in the University of Great Britain, who, at my request, kindly sent me notes of the condition of dairy education and the advancement which has been made in that connection in Great Britain and on the continent.

The first recorded history we have of any association in this State for the promotion of the dairy was in 1864. The plan of cheese factories originated with Jesse Williams, of Rome, N. Y. I quote from the *Prairie Farmer*:

“After Jesse Williams had demonstrated the feasibility of associated cheese-making, and factories had begun to spring up all through central New York, a convention was called to meet at Rome, January 6, 1864. There were representatives from sixty-nine factories present. They organized by electing George Williams, son of Jesse Williams, president, and William H. Comstock, Esq., secretary. Brief articles were adopted under the name of the New York State Cheese Manufacturers’ Association. The factories represented had the milk from 150 to 1,000 cows each. The second year the association numbered 308 members. For several years there was a steady increase in the membership. In 1866 William H. Comstock was elected president, and Gardner B. Weeks, secretary. A committee to revise the articles of association, with Harvey Farrington, of Canada West, as chairman, was appointed. Their report favored changing the name to the ‘American Dairymen’s Association,’ as its membership included dairymen from all the Northern States and Canada, and it was thought desirable to broaden the scope of subjects for considera-

tion, so as include butter and whatever pertained to dairying. The report was unanimously adopted.

"In 1867 George Williams was again chosen president. In 1868 Governor Horatio Seymour was elected to that office — a position which he highly esteemed. He continued to nominally fill it until 1879, when he declined a renomination, and Professor L. B. Arnold was chosen president. In 1873 Professor L. B. Arnold succeeded Gardner B. Weeks as secretary. In 1874, by authority of a resolution adopted by the convention, he appointed Professor E. J. Wickson, assistant secretary, which position he filled until 1876, when he went to San Francisco to take the editorial chair of the *Pacific Rural*. T. D. Curtis succeeded him as assistant secretary, and did the practical work for the convention in 1879, when the subject of the various breeds of cattle was very thoroughly discussed. That year Professor L. B. Arnold was elected president and T. D. Curtis, secretary. Major T. B. McElrath, the founder of the *American Dairyman*, still published in New York city, was made assistant secretary.

"From about the time that Governor Seymour was elected, State organizations began to be formed, and the association steadily declined in membership, if not in interest. The State associations legitimately superseded the parent association. It was thought that meetings elsewhere than in Utica, where they had steadily been held, would draw a larger attendance. Accordingly, conventions were held in Rome, N. Y., Cleveland, O., Watertown, N. Y., and Syracuse, N. Y., but without the hoped for result.

"At the Syracuse meeting, in 1882, the time of meeting was changed to the third Tuesday in December, and the place of meeting fixed at Geneva, N. Y. No programme was prepared that year, but on the day specified a meeting of the executive committee was held in the rooms of the New York Agricultural Experimental Station, when a resolution was adopted dissolving the association, as having filled its honorable and useful mission, and transmitted its educational duties to the State associations."

I now take up the history of this association, which was the outgrowth of the old association. In continuing the history of the dairy industry of New York, I quote from a short address of the Hon. Arphaxed Loomis, of Little Falls, delivered in 1872:

"The business of producing cheese, as the chief farming product, commenced in this county (Herkimer) as early as 1810.

Though cheese was made at an earlier date, yet at this date (1810) farmers began to make cheese production a business. Mr. Ferris, Mr. Thayer, Mr. Salisbury, of Norway, and Mr. Nathan Arnold, of Fairfield, were the first, or among the first, to embark in this business. From these it extended from farm to farm and town to town, until in 1825, it had spread over a large area of the northern portion of the county, and finally into adjoining counties, and now, in 1872, it has extended into the New England States, northern Ohio, northern Pennsylvania, and in Michigan. Marketing was many years done by local buyers, going about the latter part of the season and purchasing the cheese of the farmers, to be delivered at the end of the season, and to be paid for the first of January. The cheese was shipped in casks made to hold a number of cheeses. At a later period, when buyers began to ship during the summer, the present form of package was adopted.

"About 1860, bringing cheese forward by rail began; being shipped on Mondays and Tuesdays. This led to the fixing of Monday the regular day for marketing, and buyers and sellers met at Little Falls, in the open air, by the side of the wagons. On some Mondays, before the establishment of cheese factories, a hundred or more farmers would gather in the streets near the railroad depot, each with his load of cheese, boxed and marked with his name, and twenty or more buyers among them; some from New York, Philadelphia, Boston, Baltimore, and occasionally a dealer from England.

"Since the establishment of cheese factories the sales are made by sample, or by previous inspection by the buyers, the price to be fixed on market day. This suggested the establishment of a board of trade."

The organization of the board of trade was originated by X. A. Willard, of Little Falls, N. Y., and upon his suggestion a call was issued and a large number of dairymen of central New York, met at Little Falls on the 27th day of February, 1871, and the New York State Dairymen's Association and the Board of Trade organized. This was the first board of trade organized on this continent.

The following preamble and by-laws were adopted:

WHEREAS, For the better promotion of the dairying interests of the State of New York, it is deemed expedient to organize a State dairymen's association with its headquarters at some point as near central in the dairy districts as practicable, and where ample

information in regard to dairy farm management, cheese and butter manufacture, and the marketing of dairy products can be most readily obtained and disseminated ; and

WHEREAS, The largest and most prominent market in the country for the purchase and sale of cheese directly from the producers, for some years past, has been held steadily on every Monday during the producing season at Little Falls, in the county of Herkimer, and is located centrally in the great dairy district in the State and is convenient of access and for shipment of produce and is well adapted for the purposes of the association ; therefore,

We, the undersigned, do hereby associate ourselves together for promoting the best interests of dairy farming, of cheese and butter manufacture, and the marketing of dairy products.

1. The name of the organization shall be the "New York State Dairymen's Association and Board of Trade."

2. The officers of the association shall consist of a president, twenty vice-presidents, a secretary, a recording secretary, treasurer and six directors. The following were chosen officers of the organization :

President, X. A. Willard, Little Falls.

Corresponding secretary, Josiah Shull, Ilion.

Recording secretary, Watts T. Loomis, Little Falls.

Treasurer, David H. Burrill, Little Falls.

The first annual convention was held at Little Falls, at the board of trade rooms, on the 2d and 3d days of January, 1872. The following was the program :

NEW YORK STATE DAIRYMEN'S ASSOCIATION AND BOARD OF TRADE.

The first annual convention of the New York State Dairymen's Association and Board of Trade, will be held at the board of trade rooms, in Little Falls, N. Y., on Tuesday and Wednesday, January 2 and 3, 1872.

The executive committee have fixed upon the following program for the meeting :

TUESDAY, JANUARY SECOND.—11 A. M.

The convention will be called to order for the transaction for preliminary business.

Opening address by the president, 2 P. M.

Papers will be read by the following gentlemen, on the topics specified.

3 P. M., J. W. Cronkhite, of Herkimer county, "The Commercial Aspects of the Dairy."

4 P. M., T. D. Curtis, of the *Utica Herald*, "Cheese-making as a Science."

5 P. M., Hon. Harris Lewis, of Herkimer county, "How shall we Improve our Dairy Stock?"

EVENING SESSION.

7 P. M., The annual address will be delivered by Leander Wetherell, of the *Boston Cultivator*.

WEDNESDAY, JANUARY THIRD.

10 A. M., Hiram Walker, of Oswego county, "Dairying and Stock Raising in Oswego County."

11 A. M., E. J. Wickson, of the *Utica Herald*, "Chemistry of the Cow."

AFTERNOON SESSION.

2 P. M., David W. Lewis, of the city of New York, "General Marketing of Produce."

3 P. M., L. B. Arnold, of Tompkins county, "The Future of Dairy Husbandry in the United States."

Dr. L. L. Wright, of Oneida county, M. Quinby, A. Diefendorf, and Alexander McAdam of Montgomery county, and others, are expected to address the convention on topics they have not yet indicated.

After the reading of each paper, time will be allowed for full discussion of the subject.

Beside the topics alluded to, members of the convention may present any proper subjects for discussion.

Members Tickets.

By paying one dollar, any person may become a member of the association, which entitles him to a seat in the convention, the use of the board of trade rooms on market days, and to all the privileges of the association during the year.

Single admission tickets fifty cents each, for the convention, or twenty-five cents for each day.

Admission of ladies and newspaper reporters free.

X. A. WILLARD, *President*.

JOSIAH SHULL, *Cor. Secretary*.

ILION, N. Y., December 9, 1871.

The opening addresses were made by President X. A. Willard. I quote from his address :

“This association is organized to discuss questions pertaining to the dairy, and to compare views that we may be able to get the best practice, and thus make progress and improvements.

“The history of organization for the discussion of topics relating to the dairy goes back no further than January 6th, 1864. The first convention, occurring in Rome, N. Y., was most remarkable in its results. The call was made by about forty leading cheese manufacturers and dairymen, among whom, Jesse Williams, the originator of the factory system was prominent. There was an immense gathering, crowding the largest hall in the place, and people in all parts of the State were anxious to get newspapers reporting the meeting. Since that time there has been a large number of dairy organizations formed — State and local — and the knowledge diffused on this subject is extensive, and its value can scarcely be estimated.

“Contrast the general progress. In 1859, Samuel Perry, contracted the great bulk of cheese made in this (Herkimer) county, and in other parts of the State, at ten cents a pound. Much of this cheese was so poor and worthless as an article of food, that it had to be thrown into the docks. We had no name abroad, and our cheese in England was only considered fit for paupers or people of the lowest class. The great bulk of Herkimer county cheese made fifteen years ago, was soft, slushy, liable to fall in pieces, and easily tainted.

“The exports of cheese, according to official returns, exported from January 1st, to December 24th, 1871, was 67,530,000 pounds and for the same time in 1870, 61,451,500 pounds, showing an increase in 1871 over 1870, of 6,078,500 pounds. In 1870 we exported 1,394,200 pounds of butter; in 1871, our exports were 8,519,700 pounds.”

At a convention of the New York State Dairymen's Association and Board of Trade, held at Binghamton, in December, 1874, Mr. Willard, in his opening address, said :

“On the 6th of January, 1864, there occurred in Rome, in this State, the first convention of dairymen that had ever been called together on the continent. At that time associated dairying was scarcely known outside the central counties of New York. The butter factory system at that time had not been inaugurated.

* * * According to the census return, the milch cows in the United States in 1850, were 6,385,094; in 1860 there were 8,581,795, and in 1870, they numbered 11,088,925, thus showing that the average increase was less than 2,500,000 cows for each decade."

I am told by old gentlemen that were interested in cheese-making in those days that it was a common practice for dairymen to go long distances to attend these conventions and to pay a dollar apiece for the privilege of going inside of the convention and listening to the papers read and addresses made on those occasions, and that in that way the association was supported. It shows that there was a great interest taken in those days and a great reaching out after knowledge. That was the beginning of any system of organized education, and it was voluntary on the part of those who sought after it, but it was productive of grand results, and upon it was built this great dairy interest of the State of New York. It was built upon a foundation of good common sense and practical knowledge, for which these men traveled miles and miles and paid a dollar each to get the benefit of these conventions. Those men have now passed away and are no more engaged in this industry, and there have come up in their place another class of men; I refer to the average dairyman and manufacturer of cheese of to-day; a class of men who are not as well informed as they were, and who are not making as good an article of cheese. I now refer to the average cheese-maker. We have now a class of men who are making cheese who are only apprentices in the business; who go through the motions of making cheese by some sort of rule they have obtained somewhere, but who know nothing about the scientific principles and variations of temperature, and those things which so much affect the quality of cheese. Hence the necessity for more education on the subject. I recollect, in 1852, of visiting a brother in Jefferson county, who was a dairyman and made cheese, or his wife made the cheese, and on the street where he lived every farmer was a dairyman and cheese-maker, and every farmer's wife, except my brother's, was striving to see who should get their cheese out of the way first before dinner; and I remember her telling me why it was that when they sold their cheese they always got the best price; the reason was she never made it a rule to get it out of the way before dinner. I remember that the cheese was sent to market by steam-

boat to Oswego, and through the old canal to New York, and when the returns came back my brother received six and a quarter cents per pound, while those smart women, who wanted to hurry up their cheese, got only six cents for theirs. She made cheese more in accordance with scientific principles than the others did.

The dairy interests of this State is increasing very fast, so that now we have about 1,563,500 cows employed in the production of milk. The total milk product of the State is 5,697,819,687 pounds, and the total value of the product is \$56,978,197 for the year. The value of the land, cows, implements and buildings employed, is \$350,500,000. With this enormous investment there is in this State, in the dairy business, thousands of families who depend for support and maintenance and for the education of their children and for the support of churches and schools, upon this great industry.

I shall now refer to what has been done in promoting the dairy industry in this State within a very few years. We have entered upon a new period of progress; a new decade. The Legislature, in 1887, made an appropriation of \$2,000 to this association, which was more than the usual working appropriation, in order to hold butter conferences. Two conferences to illustrate butter-making were held during the summer, which proved of great interest and value. The next year (1888) \$500 additional appropriation was made, and we held four butter conferences and two cheese conferences during the summer. The effort made in holding the two butter conferences the year 1887 made such a profound impression upon the Legislature and the people who really had the interest of the State at heart, that we had little difficulty in securing the appropriation for holding the additional conferences in 1888. As an outgrowth of that feeling last winter there was an appropriation made for what were called dairy instructors, to give instructions in the manufacture of butter and cheese. So, fellow-citizens, you see when we advance a new idea in the way of progress, enterprise and development, and really set our hearts about it, it is easy to obtain success. As a result of that appropriation these instructors have traveled over a large portion of this State and given instruction, and did a grand work toward the advancement of the dairy of this State.

We have always had an idea that Europe is a slow country, and that we in America are far in advance in all enterprises in our

civilization and in our agricultural work and development, but let me say to you that there is no country in Europe so poor or so small at the present time, that they have not gone further than we have in dairy instruction; and it shows a high order of statesmanship in affording the means for that instruction. In some of those small countries the officers of the government who rule those nations, although they may be called statesmen by inheritance, they are also statesmen in intelligence and forethought. They saw that their people were poor; they saw that the products of the farm were small and the income of the workers of the land was little, and that the reason was, because of the quality of the output, and that it commanded a low price in foreign markets, and so in their wisdom they devised the idea of instructing the people, and the result reached was that in a few years the dairy products of Denmark and Sweden sold in Great Britain at the top of the market, and it has all been brought about by this system of dairy instruction. I shall quote a few words in regard to each one of those countries, showing what they are doing, and I think you will be interested in what I shall say.

“The first English practical dairy school, unconnected with a factory or with any public body, was established by a limited liability company, composed of farmers and a few of the leading land owners of the county, at a farm-house, the property of Captain Cotton, M. P., at Worleston, near Nantwich. The primary object of the school was to illustrate and teach the best known methods of making Cheshire cheese, and to effect an improvement in the butter making of the county, which, as is generally the case in cheese-making districts, has been very inferior in the past. In order to render the teaching easy of application, it is conducted upon similar lines to those pursued in the best farm dairies. The committee appointed Mr. George Willis, a member of a well-known good cheese-making family, as manager and teacher of cheese-making; and Miss Mary Connell, a leading pupil of the Munster dairy school, as teacher of butter-making. During the first year, the forty pupils who passed through the school remained various periods of from one to seven weeks. In some cases immediate and valuable results were obtained by these persons upon their return to their own dairies, and the whole of the pupils wrote in the most distinct terms of the satisfaction with

which they had received their instruction. In the past year the school opened in April, and during the season sixty-three pupils passed through it. It should be mentioned that the teaching is chiefly in connection with actual practice, cheese, or butter, or both, being made daily. The work is performed with the assistance of the pupils, who are shown how mistakes may be corrected and good results obtained; in the butter-making depot practical observations are made, and the superiority of the best systems shown; such, for instance, as that of churning cream in the place of milk. The use of the separator is taught. The milk which passed through the school dairy in 1887 amounted to 38,000 gallons, in all, twelve tons; 1,600 weight of cheese was made, which sold at a good price. The school also made and sold 2,582 pounds of butter, which averaged one shilling three pence per pound, and 350 pounds of whey butter. A large quantity of whey and milk was also sold. The pupils paid in fees £95 5s. 6d., and they cost for board £30 15s. 2d.; on the other hand, the payment for manager and teaching, with secretarial traveling expenses, stationery, etc., amounted to £232. The total payments of the year amounted to about £1,158, or £86 16s. 10d. more than the receipts. Here then, is an instance of valuable work being done at a small cost. Surely a case is made out for government assistance, which, even though paid at so much per pupil, would amount to more than sufficient to maintain the school in a useful state. This success has been so great that a second school is to be opened during the current year in another part of the country. It is the intention of the committee to push investigation into the mysteries of Cheshire cheese-making still further, and to aim at the production of a still finer quality of dairy produce. The manager, Mr. Willis, takes great personal interest in his work, and has done good service, while the help of Miss Connell has been sought as demonstrator at some of the large agricultural shows, where she has given every satisfaction. The chairman of the directors is Mr. George Barbour, of Bolesworth Castle, an untiring friend of the movement; and the secretary is Mr. Thomas Rigby, whose name is now so closely identified with Cheshire dairy farming, and with the educational movement in particular, and to whom so many persons seeking instruction are indebted for help. The dairy school movement is also largely indebted to Mr. Tisdall, Mr. Roumieu and Mr. Thomas Nuttall."

In Ireland the dairy school is now in successful operation, and I will quote further :

“It is probable that no institution has achieved greater results in connection with dairy instruction than the Munster Model Agricultural and Dairy National School, which is within three miles of Cork, and which exists for the instruction of young men in the science and practice of agriculture, and of young women in dairy management. During the conference of the British Dairy Farmers’ Association in May, 1887, we had the advantage of visiting this institution, and of personally seeing the admirable manner in which it is managed by Mr. Smyth, the director. The school consists of an admirably arranged building and farmstead, to which a farm of 126 acres is attached. The soil is described as a sandstone debris, with a chalky subsoil. About two-thirds are grass, and the remainder arable, and upon the farm are kept thirty-five milch cows, which are selected for their milking qualities. The conference party when at the school numbered nearly 130 persons who were entertained at dinner by the ladies’ committee; the menu, which consisted of thirty dishes, being entirely prepared by the thirty pupils, one girl taking each dish. From this it will be seen that cooking is also taught. We were also shown the capacity of each girl as a dairymaid, as exemplified by the butter she had made up and which was waiting for inspection. This institution, which is within three miles of Cork, was established for the purpose of affording instruction in the science and practice of agriculture to the sons of farmers and others. A local committee coöperates with the Commissioners of National Education, and their officers, in watching over the interests of the school, in collecting local funds, and in applying these funds to objects which they think best calculated to promote agricultural education in Munster.

“The two main departments of the institution are :

“I. The instruction and training of the sons of farmers and others in the best modes of developing the resources of the land.

“II. The instruction of the daughters of farmers and of others in improved modes of dairy management.

“On the farm practical experiments are carried out in the use of manures, the cropping of land, the feeding of cows, both in summer and winter, and in the rearing of calves, etc. It may be mentioned in passing, that the young men have the advantage of practical

demonstration in the most approved means and appliances used in the cultivation and management of the soil, and of dairying, as well as in accounts, surveying and leveling. Lectures are given them upon agriculture, natural history, as applied to the farm, chemistry, geology and physiology of farm stock."

The institution has been a great success in Ireland.

The next thing I wish to speak of is something that touches us all, because it come home to us with sad reflections.

"The last two conferences were attended by leading authorities from America, France, Holland and Sweden. The fourth is to take place in Norfolk and Suffolk under the presidency of the Marquis of Bristol, who, like his predecessors, Lord Vernon and Lord Powerscourt, will undoubtedly render great service to the important interests he represents."

You recollect we were told last night that Professor Arnold was a delegate at this conference, which was presided over by Lord Vernon, president of the association. Professor Long says, and he has given this subject a great deal of thought and investigation:

"In a word we are convinced that the British students should be taught to make any class of dairy produce, which finds a ready sale in his country, and that his knowledge should not be gained by mere theory and experiment, but by theory and daily practice where manufacture is conducted from a business standpoint, and where the reasons for the many complicated questions which arise in connection with the temperature or fermentation, rennet or fungi, can be explicitly given. This branch of dairy education is quietly and steadily proceeding; but, inasmuch as the students, whether they are private pupils or pupils of the Royal Agricultural College, are persons of education and some position in life, it is certain to have considerable influence in the near future, when they will be in a position to bring their knowledge to bear to its full, and to commence to supply, or assist others to supply, our markets with their wares. We do not feel any hesitation in stating our belief that this new scheme of dairy education in Great Britain will make itself felt earliest and keenest by the foreign dairy farmers, who supply our markets with some of the most popular continental cheeses, because, although the quantity consumed in this country is comparatively small, it is really great."

I quote further: "In all probability the most remarkable position which British dairying has now assumed has been

gained more by the aid and impetus given by the annual conferences of dairy farmers than by any other special course of action."

Now, we can hope here in New York, with our 1,563,000 cows, and our nearly \$400,000,000 of money invested in dairy property; can we hope to make cheese and butter in this country, and compete with those nations that are educating the young men and young women in scientific and practical dairying, so they can produce products of the dairy farm of the highest order and character; can we send our cheese there, that is made by these men who simply go through the motions of cheese-making without any knowledge of scientific principles, and without any skill comparatively, and expect to successfully compete with them? How can we expect to open up a market under these conditions? You say you all make good butter and cheese in Oswego county, but I want to ask you why it is, if you go to New York and visit the warehouses of the butter merchants, you find that half the butter made in New York is sold way below the product of the northwest, and a considerable part far below what is any remuneration to the maker, the farmer or the toiling man and woman on the farm who produce the article?

Now what we want is skill and knowledge that will enable us to produce an article that will bring a remunerative price.

Now I call your attention to France:

"The dairy school of the department of La Manche was opened in August, 1886, by order of the Minister of Agriculture. It is intended to prepare teachers to give advanced instruction to farmers in general, and to young people destined for an agricultural career, with special reference to the dairy industry. The establishment occupied the spacious buildings of the farm of Vieuxchateau; there are capital class-rooms, dining-rooms, dormitories and other requirements, especially as regards health and light. Upon the farm attached to the school the pupils are able to see and follow all the operations of culture. The pupils received are either boarders, day-boarders or externes; the first-named pay six pounds, the second ten pounds and the externes two pounds per annum, in three terms in advance. They are also required to pay per annum a sum of twenty francs, (sixteen cents) as a guarantee of payment of articles broken, spoiled or lost by any fault of their own. The government annually provides ninety-

six pounds and the department £160 for scholarships, which are arranged by the Minister of Agriculture and the prefect of the department, upon the proposition of the committee of surveillance. The scholarships, or purses, as they are termed, go to successful pupils whose parents' means are shown to be insufficient for the education of their children. Pupils are received after examination, which takes place on the third Monday in September, and the course which commences immediately afterwards, terminates on the last Saturday in August. Pupils must be between fourteen and twenty years of age, and they are required to furnish the usual registers of birth, vaccination and good conduct."

In France dairy schools are a success. Now go to Germany:

"It is an undoubted fact that we owe a great debt to Germany for the valuable discoveries she has made, and the facts she has elicited through the medium of multitudes of experiments in the science and practice of the dairy. We must not, however, omit to notice that this good work has almost wholly been done through the action of the imperial and provincial governments in affording pecuniary aid; first for the instruction and preparation of teachers, and next for the conduct of experimental work. This aid has not been great; but, remembering the laborious, patient and careful nature of the German scientist, it has been sufficient to enable him to solve problems to which we in Great Britain have not had the time or the means to turn our attention. The prizes connected with agricultural science and the pay for agricultural scientific work are not so great that the few qualified men we have can afford to neglect the ordinary means of earning subsistence. Government aid, however, although given with a careful hand, would afford the means of solving many difficult questions, each of which at this moment stands in the way of greater profit or larger returns to the dairy farmer.

"Germany is splendidly equipped as regards agricultural education, from the humblest to the highest degree; and it is now within the means of every Hanoverian farmer or Pomeranian peasant to obtain instruction in the elementary science as well as the practice of dairy work. The universities and schools, where the dairy is but a passing subject, are supplemented by a traveling lecturer, the forty dairy schools and institutes and the numerous societies, most of which take the deepest practical interest in education."

These advantages are not within the means of a single boy or girl in the State of New York, except they go to an agricultural university. That is all we have got.

To go on further in regard to these German schools:

"Instruction is practically free, although it costs the school from fifty to sixty shillings per month, one-half the expenses being provided by the State. The girls must be at least sixteen years old, and they are taught book-keeping, the feeding of cattle, poultry and swine, milking, the manufacture of butter and cheese and the various duties of the house, including—and this is worthy of notice, for it is the first case of the kind in which we have found such subjects form part of the curriculum—the preservation of fruits, the manufacture of fruit wine and the system of drying fruit, which instruction is of a most valuable kind. Among the clothing which they are required to bring must be wooden shoes. The farm comprises 125 acres, on which thirty cows, ten young cattle and twenty pigs, with poultry, pigeons and ducks are kept. The cattle are stall-fed throughout the year, and the calves are hand-fed by the pupils from birth. The butter, sold in one-half pounds, is not touched by the hand, and realizes a high price."

There are thirty dairy schools in Germany. Now we go to Holland, to the home of the famous Holstein cattle.

"The dairy school of Lensahn, which was opened in July, 1883, is intended to prepare young men to be efficient dairy farmers, and to instruct farmers themselves in dairy work. The milk passed through the dairy daily is from about 200 cows, and it is chiefly separated by Lefeld's new separator and the cold setting systems. This milk is manufactured into the finest butter, and Holstein, Luneberg and Dutch cheeses, the refuse going to swine. Pupils commence with theoretical instruction, which is given by Mr. Gavel, the director, who subsequently introduces stock management, and the technical subjects, with book-keeping. There are three courses yearly, commencing May first, November first and January first, respectively, the first course being devoted to theoretical study. The fee, which includes lodging and board at the directors' table, is £20 for the six months' course, of which £15 is paid on admission, and the balance at the end of three months. For a three to four months' course the fee is £15; arrangements can also be made for a longer or shorter residence."

Next we come to Italy, even Italy. There are dairy experimental stations in Italy; "One at Emilia and one at Lodi, these being the two leading institutions in Italy in connection with dairy farming. Italy of all countries is wonderfully provided with means of practical and theoretical study in all that concerns agriculture. There are twenty-one royal agricultural schools and seven special schools, of which one is solely for the instruction of students in dairy farming and dairy work. There also seventeen superior and five inferior normal schools of agriculture, as well as ten schools for females. In addition to these there are twenty elementary schools of various kinds, designed for the study of various branches of Italian farming and crop growing."

You see that Italy has taken a stride, the land of peanuts, oranges and volcanoes has taken a stride away beyond us of this boasted American continent, with our high order of civilization.

Now, Switzerland:

"There are, in Switzerland, numerous farms and cheese factories upon a model system, which are frequented by young people desiring to develop their knowledge from the point of view of essential practice. These exploitations belong to particular individuals, and receive no government assistance. The various societies of agriculture in Switzerland occupy themselves, among other things, with the amelioration of the dairy industry, in organizing courses of instruction, lectures and exhibitions of the produce and the appliances of the dairy; and they receive on this account pecuniary aid, both from the cantons and from the confederation. Finally, the government grants other subventions to those cantons which undertake regular inspections of the cheese-making establishments in their district. These inspections are made by experts."

I come now to Denmark:

"The system adopted in the education of young people upon the best Danish dairy farms in many respects resembles that which the French government conducts at its farm schools, and the Germans in connection with their dairy farm schools. Pupils remain for periods of from six months to two years; they pay small fees, varying from £3 to £5 a year, and work both in the dairy and on the farm as hired servants. In some cases, however, higher fees are paid by young men and women of better position; and upon farms where both classes are taken, the latter take

their meals at the farmer's table, which is not always the case with the former."

Now Sweden:

"The earliest efforts in the direction of organized instruction commenced in the year 1851, when the government sent out two dairy teachers, who were appointed for the whole of Sweden, paying them salaries of £200 a year, in addition to free tickets and an allowance of six shillings per day when they were traveling. If a dairymaid desired to improve her practice, it was the duty of the instructor to go to the farm, and stay as long as was found really necessary in order to instruct her fully either in butter-making or cheese-making; and at the same time to assist the farmer, especially showing him how to feed the cattle, in order to produce the most and richest milk and the best butter. At the age of sixty-five, or when he has been thirty years in the government service, the instructor is pensioned.

"Connected with the two royal agricultural colleges (Alnarp and Ultuna) are dairy schools, started by the government in the year 1883, each receiving a grant of £280 yearly. Young men are admitted to these colleges either as in-students or out-students.

"The government pays every year thirty-two girls £8 6s. for learning butter and cheese-making on good dairy farms. One or two go to each farm, which the government traveling teachers go and inspect two or three times during the year. The girls are required to do every kind of work in the dairy and also milk the cows and feed the calves. In Sweden, women always milk, one girl being capable of milking from ten to seventeen cows. The farmer is required to teach the girls dairy management, arithmetic, writing, spelling, reading and dairy book-keeping, and the management of the steam engine and separators; and for this teaching he receives £5 10s., for each girl, who lodges and boards on the farm, and pays the farmer with her work in the dairy."

These farms are situated in different parts of the middle and south of Sweden. They are fifteen in number.

Compare those Swedish girls with our modern American girls. The government of Sweden appropriates \$25,000 annually for the support of these dairy schools.

We now come to the land of shadows — Norway — little Norway:

"One State-aided dairy school exists at present, viz.: The Brandbo dairy school at Hadeland for male pupils only. During

the present spring (1888) two additional schools are to be opened, one in the districts of the west for females. * * * *

The report of the Society for the Promotion of National Welfare gives complete details of the five dairy schools which are conducted under its auspices, and these details are of extreme importance, inasmuch as they show the practical nature of the dairying which is actually done, and in which the pupils are required to assist as though they were paid servants. The society receives from the State an annual contribution of 16,500 crowns (£907). It has eighteen district branches and four special branches, and thirteen of the first named have 132 local subdivisions. The funds of the society were chiefly devoted to the promotion of dairying in 1886 and 1887. It maintains three dairy instructors, whose services are in constant demand, owing to the greatly increasing number of dairies which are being started. It is stated that, as the government intends to make grants to these five schools, the society will gradually drop them, and leave them to the care of the State."

I will quote no further from the work that has been done in Europe in connection with dairy schools, but will briefly call your attention to the proposition which I want to bring before this association to inaugurate a system of dairy schools in the State of New York. We want a new crop of boys and girls in this State who can look forward to the acquiring of a profession which shall connect them with the farm and which shall stimulate the agricultural industries of the State. They must receive an agricultural education; you may ask where the teachers will come from; I would answer, they will come in part from Cornell University. That institution is already endowed, and I am satisfied that President C. K. Adams, and the gentlemen who control that institution would gladly increase their work in this direction if there was proper encouragement given. There would be no lack of teachers.

How shall we inaugurate such schools in the State of New York? We, of course, can not do it by any arbitrary system as is done in Europe, but our Legislature can make an appropriation of a reasonable sum of money to be placed in the hands of the Dairy Commissioner, as it is proper that it should be controlled by a State officer, and let provision be made for the establishment of four dairy schools; let one be started first, and when that is full,

then another, and when that is full, then another until the four are filled; so that any boy or girl in this State, who has an ambition to receive an education that shall fit him or her for a remunerative and honorable profession, in connection with agriculture, may do so, and receive scientific knowledge, skill and culture, which shall raise the business of farming from this dog's life, which characterizes it too much now, to a more dignified and exalted employment. I hope to live, and pray God I may live to see in this State such an ambition created among the boys and girls, that they will look forward to the occupying and cultivating of our farms with more earnestness, satisfaction and success so that there will be less disposition to flock to the cities to tend bar, and to attend the store, or to do some of the minor, but unwisely and improperly considered, genteel employments. I pray God I may see that day, and that you may see that day, when we shall have in this State a dignity and character and intelligence connected with farming and dairy industry, of which we shall all be proud. Then it will not be a mooted question which shall engage the attention of such an association as this, and shall not be a nightmare to a fond mother, and a source of great trouble to the father, how to keep the boys and girls on the farm. They will stay on the farm; because with the dairy school there shall be opportunity for education and refinement, and there shall be opportunity for remuneration and a dignified position which shall command respect among the people. I am prepared to-day to hire a boy or girl to take charge of my dairy, who has skill to make good butter. I am prepared to hire them and pay them a remuneration that is worth twice as much to them as any salary they could get in a store or in a bar-room, or any of these city positions, and give them a home as good as I have, where they can sit by my side, and we could respect each other, because we all respect honest labor. All over this State there are hundreds and thousands of men who would be glad to hire an intelligent boy and girl who are competent to take charge of the dairy, and would pay them a fair remuneration for their labor; and there are hundreds of men who would buy farms if they could get somebody to go on that farm and take charge of a nice dairy of cows and make it pay its own way. While I was in New York city, connected with the American Institute for five or six years, there were more than a thousand men applied to me

to get them someone to take charge of their country places, and I never was able to get but one young man. Why? Because I couldn't find the young man that had the intelligence and independence of character to take charge of a gentleman's place; and and so these gentlemen sold their places after a few years, because they could get nobody to take care of them but someone who had no brains, and their places became a nuisance and a damage to them, and they sold them at a sacrifice. Why is it that the farming business is at so low an ebb to-day all over this State? Why is it that there is no demand for farms? Is it for the want of intelligent farmers and intelligent young men, who can be employed as laborers or as assistants on these farms? That is the reason. If there were those kind of laborers to be had there would be no limit to the demand for the purchase of farms, and there would be gentlemen by the hundreds and thousands who would be ready to purchase if they could find such men to take care of them.

My plan to remedy all this is that the Legislature should make an appropriation for these schools, to be established in a village, and I suppose Oswego is a very nice, genteel, clean-cut village or city; and I suppose there are hundreds of such villages in the State, and I suppose that not far from all of those villages, within a walking distance there lives an intelligent dairyman, and I don't know but there are hundreds of them in this State. Now, let the State of New York establish in that village a dairy-school, under the charge of a scientific and skilled man, who shall act as the professor or principal of the school. The students could board in the village, and a room be hired for instruction, where the teacher could hear their recitations; and let the State hire a farm near the village, and employ the man who owns it as superintendent or practical instructor of these students on the farm. That is the system that has been inaugurated in some of the countries in Europe. To illustrate: We have a select school which my children attend, and they come home and I have a dairy-school of my own. My children attend the select school and are taught science and various branches, and come home and are instructed in the dairy business. So, in these schools the pupils could be taught strictly dairy science, and could go upon the farm and receive practical instruction in the dairy farming business, and then there would be no trouble in procuring an intelligent and

educated young man or woman to conduct our dairy farms. Why, in two years time you could train an intelligent boy or girl in the business of dairying, and in connection with it teach them book-keeping and some other general knowledge, as well as a fundamental knowledge of chemistry, so that they could step out into the world with a dignity and intelligence and with a prospect of remunerative employment, or a home in a family where they would be respected, and where they could acquit themselves with honor and distinction. That is what I want to accomplish. I can not go into particulars in connection with it, but simply outline it, so you can get a general understanding of it. Of course, it would have to be formulated in a bill, making the appropriation for dairy-schools under the direction of the Dairy Commissioner. It is a simple thing to be done, and it can be done within a year, and the next summer we can have dairy schools, and in two years a new crop of boys and girls that will be looked up to with respect, and will help to improve the farming and dairy interests of this State.

Now, farmers, don't be foolish; don't think that you can not ask this of the Legislature. Who are our legislators? They are our servants; they go to the Legislature to do the bidding of the people and to further the interests of the people. We pay our share of the taxes; we pay taxes by the million for the benefit of the commercial affairs of the State and to keep the Erie canal in repair, and we are building a building down there at Albany which is considered on the one hand by those who have sufficient imagination, to be an honor to the State, and by those who have to take a practical view of things, to be the most terrible disgrace ever inflicted upon the people. We are paying millions of dollars for that purpose, so we need not hesitate to ask of the Legislature a small appropriation of twenty-five or thirty thousand dollars to establish these dairy-schools which I have outlined, and I say let us have it, and let us have it right away. [Great applause.]

Mr. FENNER.—Mr. Chairman: In order to crystallize what Colonel Curtis has said and get it in tangible form, I offer the following resolution:

Resolved, That this association approve of the plan of Colonel F. D. Curtis for the establishment of dairy schools, as we believe such schools on the farm would afford a much-needed means for scientific and practical education and training in the work of dairy-

ing, and aid in the improvement of our dairy out-put, and increase its demands and price, and also enhance the value of our farms.

Remarks sustaining Colonel Curtis, in regard to his plan of dairy schools, were made by Messrs. Fenner, Frederickson, Miller, Hall, Munson, Richardson, Edmunds, Roberts and Green, and the resolutions were adopted by a unanimous rising vote.

Mr. RICHARDSON.—I move the following:

Resolved, That a committee of three be appointed by the chair to present the subject of dairy schools to the Legislature of this State.

Adopted.

President SHATTUCK.—The chair appointed as such committee Mr. H. W. Richardson, Colonel Curtis and Mr. Geo. A. Smith.

Convention adjourned till Thursday morning at 10 A. M.

MORNING SESSION.

• THURSDAY, *December 13.*

President Shattuck called the convention to order at 10 A. M.

Professor WING.—How long should a cow be in milk?

Mr. E. A. POWELL.—I am in favor of cows going dry only from four to six weeks. I do not believe in a cow being idle one-third of the time. There is no necessity for a long period of rest as many people suppose. If a proper system of feeding is adopted it is not necessary for cows to go dry but a very short time. I should recommend four to six weeks, and I wouldn't keep a cow on my place that wouldn't milk nine to eleven months out of the year.

The butter qualities of Holstein-Friesian cows has not been heretofore very well understood. We started with the idea that they were very large milkers, but not a very good butter breed. We went to work systematically to test our cows, relative to this question, weighing the milk and also the butter, and in every way made tests to satisfy ourselves. In our own herd we have tested about sixty cows that will average over twenty pounds butter per cow per week. We have seven cows that averaged over 100 pounds each for thirty days.

Secretary SHULL.—How did you raise them to that amount of butter?

Mr. POWELL.—In the first place the essential thing is breeding. A man can take a breed of cattle and in a few years change the whole nature and character of your herd, and make butter producers from Ayreshire or from Shorthorns, if you only have the right foundation. We would feed them as we would if we wished to get the most profitable results in dairying. When we fed for butter our feed was composed of bran, ground oats and corn-meal in about equal quantities by weight. The first cow of this breed (Holstein-Friesian) that was ever known to make a pound of butter from seventeen pounds of milk was changed from twenty-five pounds milk for a pound of butter by feeding by adding a ration of corn-meal and oil-meal. Eight years ago we found it more difficult to get cows from our herd that would make a pound of butter from twenty pounds of milk than we do now to get cows that will average a pound of butter from fourteen pounds of milk. In extreme cases we have had two-year-old heifers that have averaged a pound of butter from a little over twelve pounds of milk on a week's test. Shadeland Boon, a Holstein cow, I believe, has the largest record of any cow in the world; a record of 125 pounds, made entirely by unprejudiced parties at a creamery where they had the reputation of making fine butter. Her milk was run through a separator, and made 125 pounds of butter in thirty-one days; from June thirtieth to July thirty-first. Albino 2d had the largest record before that of any cow in the world when three years old. She had a record of 18,404 pounds of milk as a two-year-old, and started in her third year without going dry and made 106 and a fraction pounds of butter in thirty days.

Professor ROBERTS.—You keep cows to produce milk and butter?

Mr. POWELL.—Yes, sir; that is what we keep them for. Another point is the question of profit and loss, and lies right along between the points of good and poor care. For instance: We often feed our cows moderately well and we reach a point where we get a moderately fair yield and a small profit, or perhaps a little loss. Now, if we add to that a small per cent in care and feed, we get a large per cent of increased profit. There is a dividing line between profit and loss. Clothilde was shipped to the New York dairy show three days after calving, and in bad condition, and she hadn't been fed grain in several months. The day we shipped her, we fed her a little grain, and the second day after

she reached New York the test commenced, and she made a pound of butter from twenty-five pounds of milk. We brought her home and we increased her feed and she increased in the amount of milk and also in the amount of butter until she made twenty-eight pounds two and a half ounces of butter in the second week after her return from New York. On her thirteenth month after she had been milked through the year, she showed a pound four and a half ounces, or seventeen pounds and a fraction per week, a gain of twenty-one and a fraction per cent. So you see that it is profitable to feed your cows well. As farmers and dairymen we should give our cows credit for what they produce from their milk. It makes no difference whether a portion of it is produced in butter or in milk that feeds a calf, or that feeds a pig. If the result is directly from that cow she is entitled to it. Her value consists in what she produces in calves or butter. So I think the cow that produces a pound of butter from twenty pounds of milk is a more profitable and desirable butter cow than one that will produce twenty pounds of butter a week and that from ten pounds of milk per pound of butter.

The chair announced the next order of business, an address on

THE SOIL, THE PLANT AND THE ANIMAL.

[By Professor I. P. ROBERTS, of Cornell University.]

Mr. President: As farmers, we have to do largely with these three things. If the first is imperfect or badly managed the second and third can not follow, so it will be seen that it is of the utmost importance that we start the foundations of success with the greatest care. In this brief paper it is not my purpose to give a scientific treatise of the chemical composition of the soil. It will suffice if I point out briefly its general characteristics and the difficulties to overcome when we attempt to increase production and diminish cost. Nature takes little account of time, and if the soil is so badly fitted for the plant that it takes a long period for its growth it matters little, but when the man cultivates plants, time is of the utmost importance. He must so cultivate the land and select the plants to be grown that the harvest will not only be abundant, but gathered in the near future. Most soils are either too wet, or too dry, are too poor, or in such bad mechanical and chemical condition as to seriously interfere with the most

profitable production. How best to relieve the soil of surplus moisture on the one hand and how best to conserve moisture on the other requires our most careful attention. On many fields a large proportion of the labor expended in the effort to raise a crop is lost because at the very beginning of the complicated process of agriculture little or no thought was bestowed upon the soil. Many fields which produce but a meager return contain a great abundance of plant food, but from bad mechanical conditions the plant can not use it. So we are met at the very threshold with numerous and complicated difficulties. We have one consolation; the things most difficult to do are those which bring the the highest reward when the difficulties are surmounted. We usually begin to study the problems of dairy husbandry at the wrong end. We fill reams of paper and rob the night of its slumbers in thought over a few ounces of cream and give little heed to the soil from which all the cream is derived. We go on year after year and use three or four acres for pasturing a single cow and cut thousands of acres of meadow which yield less than a ton per acre. I suppose we do these things because it is difficult to do better. How to improve the land when we have little manure and less money is the difficult problem for us to solve. Farm manures must be increased in quantity and improved in quality, but more than this must be done. Nature grinds the earth fine when forming the best soils. Should we not try to imitate her methods? Nature makes use of plants in building up fertility; the farmer too often ignores them in his endeavor to improve the land. Nature labels her bare soil desert; man labels his fallow. Nature summons all forces to her aid; man thinks to succeed and ignore many of them. The results of nature's methods tend constantly to augment fertility; man's, to deplete it. Nature spreads her manure in the fall on the surface where there is a plant; man, in an open barn-yard, on the hillside, under the eaves. Nature uses long tap-rooted plants where the soil is dry, sandy and poor; man sows the surface-rooted timothy on the hungry, dry hillside. Nature takes good care that the subsoil shall be in the best possible condition for facilitating the rise of water by capillary attraction, thus carrying, to near the surface, moisture and plant food where the omnipresent living plant is ready to use them and where the moisture not needed for present use is conserved by a light surface mulch; man packs and puddles the

subsoil by plowing it when it is too wet, and then leaving the surface soil without a plant and uncovered and so loose that the wind and sun soon suck up the moisture, while the plow formed hard pan effectually cuts off capillarity, and then he wonders that the plant suffer for want of moisture and food. Let us go to the woods and prairies and see if we can not learn something more of the soil from a more careful study of nature's methods.

At the close of this paper I trust opportunity will be given for the discussion of this vital subject. I avoid discussing it more in detail here, because it can be better handled in an off-hand popular way than in a set address.

THE PLANT.

We are taught that no animal can take its food directly from the soil. The elements which sustain its life must be changed, or enter into new combinations and this great office is performed by the living plant. Then no animal can exist without plant life preceding it. If this is so — and we have no reason to doubt it — the question of how to raise a plant becomes most important. How careless we are in selecting the plants best adapted to our soil and climate. We would do well to study them with more discrimination. Nature never plants cat-tail flags on a gravelly hill top, yet I have known men to try to raise celery in a sand-bank. A man in one of our leading agricultural journals wants directions as to how he may raise walnuts on a sandy piece of land. He may partially succeed if he has patience and a large enough bank account. Without being sacrilegious let me say that if he fully succeeds he will do better than the Lord ever did. Nature raises walnut trees in the black, rich river and creek bottoms.

The habits of plants are more varied than are those of animals or men. We succeed best when we work in harmony with nature's laws and not against them. Nature sows seed sparsely where plants grow tall, and liberally where they grow short. Yet I have known intelligent farmers to sow fodder corn as thickly as we sow wheat. Although they have raised corn all their lives, they have failed to learn that this Indian plant is a child of the sun. In order to get some definite knowledge to guide us in cultivating corn for ensilaging and for fall feeding, a series of experiments were conducted at our station during the last summer. The varieties planted were, Sibley's Pride of the North and Eight-rowed

Flint, sometimes called Canada or New York Flint. The ground was somewhat gravelly on the surface with a subsoil in many places of pure gravel and sand which in places came to within two or three feet of the surface. The soil in one respect was well adapted to corn, being warm and light. In other respects it was very illy adapted because of the subsoil which permitted the water to escape, leaving the plant to suffer for want of moisture during dry, hot periods. The land was moderately fertile and of a character that gives fair crops every year, but never large ones. The crop immediately preceeding was clover and timothy. The plots contained one-tenth of an acre each. The season of 1888 has been unfavorable for the largest growth of the corn plant. A cold spring and a drought in the latter part of July and the first part of August arrested to some extent the development of both stalk and ear.

Taking timothy hay as the standard and assuming that it is worth, for feeding purposes, twelve dollars per ton, we have the following result:

TABLE I.
VARIETY — SIBLEY'S PRIDE OF THE NORTH.

	Pounds per acre.	Dry-matter per acre.	VALUE PER ACRE.	
			American standard.	German standard.
Timothy	2,000	1,730	\$12 00	\$22 70
Hills, Plot 1	20,610	4,431.3	30 08	56 89
Drills, Plot 2	24,555	5,291.6	35 74	67 59
Broadcast, 4	14,535	2,468	15 23	28 81
Broadcast, harrowed, 3 ..	17,065	3,488	21 64	40 92

Flint corn was planted at the same time as that above and in adjoining plots, one of which was listed, that is planted at the bottom of an eight-inch furrow, the other the common way, with the result as follows:

	Pounds per acre.	Dry-matter per acre.	VALUE PER ACRE.	
			American standard.	German standard.
Listed, Plot 10	19,705	4,049.5	\$29 00	\$54 85
Planted, Plot 11	18,195	4,099.3	27 88	52 73

In order to find the best time for cutting the corn, samples of Sibley's Pride of the North were cut at three different periods. The dates of cutting and the results of the analysis are shown below :

TIME OF CUTTING.	Pounds per acre.	Dry-matter per acre.	VALUE PER ACRE.	
			American standard.	German standard.
Period 1, July 24	18,762	1,999.6	\$14 05	\$26 57
Period 2, Aug. 8	24,578	4,039	26 16	49 48
Period 3, Sept. 3	27,674	7,214.2	47 33	89 51

In a ride of fourteen miles through the country more than thirty small fields of sowed corn were counted, none of which appeared better, and many much poorer than plot 4 in Table I, as given above. As long as farmers will persist in sowing corn and securing less than one-half of the value per acre that they might get by raising it in hills, such investigations as are set forth above will be necessary.

THE ANIMAL.

Having made a study of the soil and learned how to raise a plant, we have still the third and most complex subject to investigate. So much depends on the inherited qualities of the animal—so much on the kind and qualities of food—so much on comfort and so much on the thousand and one petty details which add so much to the final results, that life seems too short to master fully all these combinations of forces. If the animal has little capacity no amount of skill in feeding will bring success. If the food is meager and badly balanced no amount of fine inherited qualities will save from failure. So it is not profitable to discuss whether breed or feed adds most to final production, as neither are complete or remunerative without the other. As no miracle is ever performed in these days, and as life only comes from life, and as effect is only produced by cause ; therefore we can never have a really good cow without her having some good ancestors. Her valuable qualities may be improved and made available by judicious feeding and care. But superiority never comes in a single generation if all that has gone before has been inferior. Then, too, valuable qualities which have recently appeared being

the product of small improvements in each generation are the first to disappear under adverse conditions, while those qualities which have been longest inherited are likely to be most permanent. In these few lines I have tried to concentrate all the fundamental principles of breeding and improvement of the dairy cow.

The science of feeding is of no less importance than breeding. In a recent number of the *New England Homestead*, a reliable paper of wide circulation, I find the following: "In 1883 there were over 13,000,000 milch cows in the United States. Their average production was very low. The average in the New England States is higher than in the others, but this is not much to feel proud of. New England cows give 1,416 quarts of milk in a year, or an average of 87.7 pounds of butter and seven pounds of cheese per animal. This, at thirty-five cents for butter and twelve cents for cheese gives a total income of twenty-two dollars and seventy-six cents and a half per cow." The writer from which the above was quoted, says, "it does not appear that we have improved much in feeding or breeding cows and that we are virtually where we were fifty years ago." It is true there are many isolated herds and breeds which have undergone great change for the better, but the figures above quoted come from the general statistics and embrace the very poor with the good. These figures indicate that the shrewd New Englander has something yet to learn in feeding and breeding.

After many years of careful research and observation, I have come to the following conclusions: That dairying should be conducted throughout the entire year. That in the long run it is better to raise cows than to purchase them. That inheritance has so much to do with capacity that every dairy cow should have an improved and well-bred sire. That food has more to do with quality and quantity combined than any other factor, when given fair conditions. That a narrow ration, or one having a high percentage of albuminoids tends slightly to diminish the quality of butter, but increases the quantity, provided the animal is kept in warm and comfortable quarters. That a wide ration of suitable food, that is, one with a high per cent of easily digestible carbohydrates, improves the quality of the butter and tends to develop fat in the animal, if it is kept in warm quarters, but if exposed in cold quarters then a ration highly carbonaceous will be found the best, as it is necessary to preserve the normal heat

of the animal before any surplus product can be secured. That fully double as much food for the dairy can be raised under like conditions of fertility, from an acre of corn, or rye, or of alfalfa, as from an acre of timothy, orchard grass or blue grass. That whether the first-named forage plants can be raised, secured and fed more cheaply for each 1,000 pounds of available dry matter depends largely on various conditions — such as price of land, labor and distance from the farm buildings, but in a great majority of cases the first-named products will give better results than the last-named ones. That well nourished plants give a more valuable product, pound for pound, than partially starved, or immature ones, and finally that care and judgment in feeding and milking and attention to the comforts of the animal, all play such an important part in the final result, that combined, they may be accounted the final great factor. Though success may appear to be complete when the animal and plant are brought together in the barn, all may be lost by the ignorance of carelessness of those who have never learned that no improvements can be made in men, or animals, without improved food served up in an appetizing manner. History does not furnish a single instance of a nation rising to any degree of civilization whose food was composed of a few unconcentrated vegetable products. Not a single valuable variety, or breed, of domestic animals has been developed or improved without improving their food. It is all well enough to talk of economy and compute the amount of nutriment in various foods, but it is far more important that we ascertain the quality and the power required to digest them.

Tell me the kinds of food a nation uses and I will indicate the exact point of civilization to which that nation has arrived. Tell me the amount and quality of the foods used in the dairy and I will indicate almost exactly the quantity and quality of the milk produced.

The cow requires not only an abundance of easily digestible concentrated food, fed in the best manner, but she should also have some cheap coarse products, as the stomach and bowels act most energetically when fairly distended. Then, too, the food should be fairly balanced; that is, for every pound of digestible albuminoids she requires from four to five pounds of digestible carbohydrates. The Germans value digestible carbohydrates at nine-tenths of a cent per pound, and digestible

albuminoids and fats at four and one-third cents per pound. About one-third should be deducted from the above prices, in order to make them more nearly correspond with the cost of the average American cattle foods.

A thousand-pound cow, in milk, requires each day about fifteen pounds of digestible matter, which ordinarily is equal to about twenty-four pounds of dry matter. In order to get these amounts, from twenty-eight to thirty-three pounds of mixed, air-dried foods will be required. Now, if too little albuminoids are fed, the cow does not thrive in flesh or have a good appetite; on the other hand, if too much are fed she will use these albuminoids, which are worth three cents a pound (American value), to supply the deficiency of carbohydrates, which are worth but six-tenths of a cent a pound. In either case, the economy is bad. To illustrate, let us take twenty pounds of clover hay and six pounds of cotton-seed meal; we find they contain twenty-three pounds of dry matter, or 3.7 pounds of digestible albuminoids and 11.884 pounds of digestible carbohydrates; dividing, we have a nutritive ratio of 1:3.2. Twenty-two pounds of oat straw and six pounds of corn meal contain twenty-five pounds of dry matter, or .68 pounds of digestible albuminoids and 13.798 pounds of digestible carbohydrates; dividing, we have a nutritive ratio of 1.20.

In the first instance given above, the nutritive ratio is too narrow, and expensive albuminoids would be used by the animal to make up the deficiency of carbohydrates or heat-producers. In the second case the animal would have too little albuminoids and a great excess of carbohydrates which it could not use to make up the deficiency, and so, while the animal might have a great abundance of air-dried matter and even digestible matter it would be starving for one of the elements needed, because it can not, as in the other case, use a surplus of one constituent in its food to make up for a deficiency in the other; or at least it can not use any of the twenty parts of carbohydrates for increasing the one part of albuminoids. For every twenty pounds or parts of digestible carbohydrates, there should be about four parts of digestible albuminoids. The following tables may be of great value to the reader if they are carefully studied.

A FEW THINGS TO REMEMBER.

Ammonia is 14-17 nitrogen. To ascertain the amount of nitrogen in a given percentage of ammonia, multiply by fourteen and divide by seventeen.

Albuminoids are sixteen per cent nitrogen. To find the nitrogen divide the albuminoids by six and one-half.

A pound of fat will make two and a half times (nearly) as much heat as a pound of sugar, starch or other carbohydrate. Always remember this in computing the nutritive ratio.

If your stables are warm you can economically feed a ration richer in albuminoids than the standards given.

By the nutritive ratio is meant the ratio between the digestible albuminoids, or muscle-producers, and the digestible carbohydrates, plus two and one-quarter times the fats. The fats are multiplied by two and one-quarter because it has been found by experiment that a pound of fat when fed to an animal will produce two and a quarter times as much heat as a pound of carbohydrates.

A cow in milk requires for every thousand pounds live-weight, per day, about the following, 2.5 pounds digestible albuminoids, 12.5 pounds carbohydrates and .4 pounds of fat. If we multiply the by 2.5 and add the result to 12.5 we have 13.4 pounds of heat-producer. Divide this by 2.5, the number of pounds of albuminoids, to find how many pounds of heat-producers will be required for every pound of albuminoids, and we get 5.3 pounds; or a nutritive ratio one to five and three-tenths (1:5.3).

SUNDRY FEEDING RATIOS.

The standard per day and 1,000 pounds live-weight are :

	Dry matter, lbs.	Nutritive ratio.
For maintenance.....	17	1:12
For milk.....	24	1:5.4
For milk (warm stables).....	23	1:4.5
For fattening oxen.....	26	1:5.5
For fattening sheep.....	25	1:4.5
For fattening swine.....	31	1:6
For growth young cattle.....	24	1:6

In order to get twenty-four pounds dry matter from thirty to thirty-three pounds, air-dry fodders must be used.

MAINTENANCE RATIONS.

20 lbs. timothy hay.....	{ Dry matter.....	17.3
	{ Nutritive ratio.....	1:12.7
Or 70 lbs. good ensilage.....	{ Dry matter.....	16.
	{ Nutritive ratio.....	1:12.
Or 15 lbs. oat straw	Dry matter.....	13.6
4 lbs. wheat bran	Dry matter.....	3.5
		<hr/>
		17.1
Nutritive ratio.....		1:12.

FOR MILK.

10 lbs. brewer's grains	Dry matter.....	2.31
4 lbs. cottonseed meal	Dry matter.....	3.75
8 lbs. wheat bran	Dry matter.....	7.08
70 lbs. corn silage	Dry matter.....	10.79
		<hr/>
Total		23.90
Nutritive ratio.....		1:5.2
		<hr/>
Or 10 lbs. clover hay	Dry matter.....	8.74
10 lbs. oat straw.....	Dry matter.....	9.04
10 lbs. roots.....	Dry matter.....	1.2
1 lb. corn meal.....	Dry matter.....	.9
3 lbs. cottonseed meal	Dry matter.....	2.75
4 lbs. bran	Dry matter.....	3.5
		<hr/>
Total		26.13
Nutritive ratio.....		1:5.3
		<hr/>
Or 20 lbs. corn fodder	Dry matter.....	13.59
4 lbs. cottonseed meal	Dry matter.....	3.66
6 lbs. bran	Dry matter.....	5.26
2 lbs. corn meal.....	Dry matter.....	1.8
		<hr/>
Total		24.31
Nutritive ratio.....		1:5.2

FOR GROWING CALVES.

15 lbs. timothy hay	Dry matter.....	13.34
20 lbs. ensilage.....	Dry matter.....	3.91
2 lbs. oil meal	Dry matter.....	1.78

1 lb. oats	Dry matter .....	.87
1 lb. corn meal	Dry matter .....	.90
4 lbs. bran	Dry matter	3.50

Total	24.30
Nutritive ratio	1:6.6

FOR FATTENING SWINE.

30 lbs. corn meal	Dry matter	26 64
6 lbs. oil meal	Dry matter	5.35

Total	31.99
Nutritive ratio	1:6

For convenience in compounding rations the following table has been arranged. It shows the number of pounds of digestible albuminoids and the number of pounds of digestible carbohydrates and fat equivalent to carbohydrates in each ten pounds of the various substances. That is, the fat has been multiplied by two and one-half and added to the carbohydrates :

Pounds.	PRODUCTS.	Dry matter, lbs.	Albuminoids, lbs.	Carbohydrat's plus fat multiplied by 2½, lbs.
10	Clover hay	8.74	.78	4.40
10	Timothy hay	8.89	.37	4.38
10	Corn stalks	8.04	.24	3.56
10	Oat straw	9.04	.14	4.43
10	Wheat straw	9.35	.08	3.91
10	Ensilage	1.95	.11	1.23
10	Barley	8.91	.96	6.54
10	Oats	8.90	.85	5.59
10	Rye	8.84	.84	6.59
10	Corn	8.95	.84	8.66
10	Brewer's grains (wet)	2.50	.40	1.33
10	Malt sprouts	8.97	1.88	5.51
10	Cottonseed meal	9.17	3.57	5.14
10	Linseed meal (N. P.)	8.92	2.83	3.50
10	Wheat bran	8.76	1.17	5.13
10	Gluten meal	9.18	2.33	6.05
10	Potatoes	2.5	.21	2.23
10	Sugar beets	1.85	.10	1.70
10	Carrots	1.5	.14	1.30
10	Turnips .....	.8	.11	.64

MANURIAL VALUE OF FODDERS.

In general, only from ten to twenty per cent of the manurial value of a fodder is made use of by the animal. That is, the value of the manure, if it is all saved, is about eighty per cent of the value of the fodder as a fertilizer. In the following table the value of ten pounds of different fodders for manure, after twenty per cent has been taken out, is shown. Nitrogen is reckoned at seventeen cents per pound, potash at four and one-half, and phosphoric acid at seven:

10 lbs. brewers' grains, manurial value.....	\$.013084
10 lbs. red clover hay .....	.036516
10 lbs. spring barley, grain .....	.027612
10 lbs. potatoes.....	.008368
10 lbs. turnips.....	.004140
10 lbs. corn meal ....	.023828
10 lbs. cottonseed meal .....	.109530
10 lbs. young grass .....	.013024
10 lbs. wheat bran .....	.050900
10 lbs. malt sprouts.....	.067544
10 lbs. oat straw.....	.011884
10 lbs. wheat straw .....	.010028
10 lbs. oats.....	.031168
10 lbs. peas .....	.057032
10 lbs. timothy hay .....	.020000
10 lbs. sugar beets.....	.004028
10 lbs. ensilage .....	.004860
10 lbs. linseed oil.....	.075088
10 lbs. buckwheat bran.....	.048024
10 lbs. corn stalks.....	.012952
10 lbs. field beans .....	.066868

In the above table it will be seen that if we move the decimal place one figure to the right we have the value of a hundred pounds; if we move it two places to the right, the value of a thousand pounds; multiplying this result by two we have the value of a ton. To illustrate: Let us take oats, ten pounds of which is worth, by the table, a little over three cents; remove the decimal one to the right, and we have thirty-one cents; move it two places and we have three dollars and twelve cents; multiplying this by two we get six dollars and twenty-four cents, the

manurial value of a ton of oats after they have been fed. To get the value of a less number of pounds than ten, prefix a naught and move the decimal point one to the left; this will give the value of one pound; then multiply by the number of pounds of that material in the ration.

For illustration, the manurial value of the third ration for milk given above would be per day and 1,000 pounds live weight:

Twenty pounds corn fodder	\$.025904
Four pounds cottonseed meal.....	.043812
Six pounds bran.....	.030540
Two pounds corn meal .....	.004765
	<hr/>
	.11
	<hr/>

The market value of the ration at present prices would be:

Twenty pounds corn fodder, at five dollars per ton.....	\$.05
Four pounds cottonseed meal, at twenty-five dollars per ton	.05
Six pounds bran, at twenty dollars per ton.....	.06
Two pounds corn meal, at twenty dollars per ton.....	.02
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	.18
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The chair announced an address on

THE PRODUCTION OF CORN.

[By EDWARD TARBELL, of Ithaca, N. Y.]

The report of the Department of Agriculture for 1887 gives the number of acres planted to corn in New York State as 709,406, and the number of bushels produced as 23,410,000, the value of which at fifty-six cents per bushel is \$13,343,700. Of the amount produced we export about one-twenty-fifth and the remainder is consumed at home. Corn then seems to be one of our most important articles for feeding. Then as we plant and consume so much corn, what amount of seed shall we use in order that the greatest profit may be realized?

Last spring I began a set of experiments with the object of determining the amount of corn and fodder produced when the amount of seed was 1-2-3-4-5-6 stalks growing in each hill. The ground was divided into plots consisting of ninety hills each, the hills being three feet apart. The place selected was near the center of the field and on soil that appeared to be exactly the same. The field was a piece just broken for the first time and in charac-

ter a yellow loam perfectly free from stones or gravel. No fertilizers were used, as I considered the soil abundantly rich without their aid. The corn was planted May nineteenth. On July first I took a report of the condition and found the corn on all the plots about equal in height.

When the corn was cut, and after being thoroughly cured, was husked. The amount of corn and stalks produced was as follows :

Number of stalks to a hill	1	2	3	4	5	6
Pounds of corn	47	63	83	80	62	65
Pounds of stalks	82	110	126	125	137	116

This then reduced to acres, our unit for land and yield would be, per acre :

Number of stalks to a hill	1	2	3	4	5	6
Pounds of corn	2,527.19	3,387.51	4,462.91	4,301.60	3,333.74	3,495.05
Pounds of stalks.....	4,409.14	5,914.70	6,775.02	6,721.20	7,366.49	6,237.32

So far the yield has been given in pounds, including the cobs. This amount reduced to shelled corn, twelve pounds of cob being allowed for every sixty of shelled corn, would be :

Number of stalks.....	1	2	3	4	5	6
Pounds of corn	2,105.4	2,806.2	3,718.8	3,584.4	2,777.4	2,912.4
Number of bushels.....	35.09	46.77	61.98	59.74	46.29	48.52
Bushels approximate	35	46¾	62	59¾	46¾	48½

According to these experiments, the greatest yield is where there are three spears per hill. Then as No. 3 produced the most corn let us take it as a standard and notice the relation of the other plots to it :

	Bushels.
With three spears per hill, sixty-two bushels were produced.	
With two spears per hill, the amount was less by	15½
With one spear per hill, the amount was less by.....	27
With four spears per hill, the amount was less by.....	2¼
With five spears per hill, the amount was less by.....	15¾
With six spears per hill, the amount was less by.....	13½

It seems then that it is not profitable to plant but three spears in a hill. The difference between three and four of two and one-fourth bushels per acre is more than enough to pay for the extra trouble and time in planting. But the other plots show a decided falling off, the difference being from thirteen to twenty-seven bushels. The yield of stalks was also best per lot 3, with the exception of No. 5. And here I attribute the increase to those variations which are liable to occur in any single set of experiments. What tends to prove it still further is the fact that No. 6 is far below, with a yield even less than No. 4. However, the difference between three and four is very slight, only fifty-four and eighty-two hundredths pounds per acre.

Now, as the general farmer, and especially the dairyman, feeds all his corn, what is the relative value of the combined corn and stalks of these plots. According to the German method in estimating the value of foods :

The digestible albuminoids and fats are worth..... 4 1-3 c. per lb.
The digestible carbohydrates are worth..... 9 c. per lb.

In one bushel of corn, there are of
Digestible albuminoids..... 5.02 lbs.
Digestible fats..... 2.52 lbs.

7.54 lbs. at 4 1-3 c. = .3257
Digestible carbohydrates..... 39 lbs. at 9 c. = .351

Total, per bushel..... \$0.67

The corn stalks also contain of
Digestible albuminoids 1.1 lbs.
Digestible fats 0.3 lbs.

1.4 lbs. at 4 1-3 c. = .0596
Digestible carbohydrates 37 lbs. at 9 c. = .333

Total, per cwt..... \$0.3926

Applying this valuation to our table, and we have for

GERMAN.

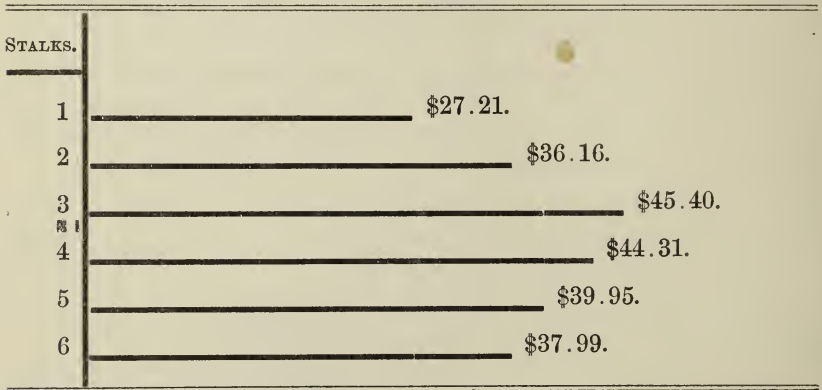
Number of stalks.....	1	2	3	4	5	6
Value of acre of corn.....	23.51	31.83	41.52	40.02	31.01	32.50
Value of acre of stalks.....	17.31	23.22	26.59	26.45	28.92	24.48
Total value.....	40.82	54.55	68.11	66.47	59.98	56.99

But the Germans estimate this value of food about one-third higher than do we. So reducing these values to conform to our standard, we would have:

AMERICAN.

Number of stalks.....	1	2	3	4	5	6
Value	27.21	36.16	45.40	44.31	39.95	37.99

This table illustrated by lines giving each dollar the space of 1-16 inch, would be as follows :



So far, I have spoken only of the quantity of the corn, now as to quality. In plot one a large proportion of the stalks produced two ears. A good many of the stalks of plot two did also, but not so many as in plot one. Plots three and four produced as a rule large, sound ears, while those of five and six were smaller and the corn of poorer quality. It was noticeable also that the plots with few spears matured a few days earlier than those with five or six. And the value of these few days gained was shown here. A heavy frost came. The corn of the plots with few spears was uninjured, while those of more stalks was damaged considerably. This then tends to show that few stalks in a hill influences early maturity.

Now, according to these experiments the man who plants a large area of corn, either for the food produced, or for the commercial value, will find his profit greatly influenced by the amount of seed used. It is not a case of more producing much, but rather of little producing the maximum amount. Then by

the use of little seed we may hope for three important advantages, and these are :

First.—Increased production.

Second.—An article of better quality.

Third.—A tendency to escape frost by early maturity.

The chair announced the next order, an address.

A PLEA FOR THE THOROUGHBRED BULL.

[By Professor H. H. WING, of Ithaca, N. Y.]

You will probably say that this subject is too old to be of any interest in discussion; that there has been so much of it in the agricultural papers for the last ten years that everyone is perfectly familiar with the advantages of the thoroughbred sire; that the breeders of improved cattle have been so persistent in advertising and pushing the claims of their favorites that the scrub and all his relations have been forced into merited oblivion.

Notwithstanding all this, undoubtedly three-fourths and in all probabilities, seven-eighths of the calves that will be born in this State next spring will have been sired by scrubs, or at best by bulls of mixed blood that will not transmit with any certainty to their offspring whatever desirable qualities they may themselves have.

So long as such a state of affairs exists there is no excuse for "letting up" on the discussion of this subject; but before making our special plea for the thoroughbred sire, it may be well to understand what we mean by the terms thoroughblood and thoroughbred as applied to domesticated animals. By these terms we simply mean such animals as are descended from a line of ancestors in which for many generations the desired forms, qualities and characteristics have uniformly been shown. Such animals will have become capable of reproducing those characteristics with almost unerring certainty to their offspring. The value of thoroughblood depending on the law that "like produces like," and the equally important law that "variation produces variation," has been more or less understood and made use of ever since Jacob, by means of the peeled rods, was enabled to change the solid-colored herds of his prospective father-in-law, Laban, to the "ring streaked and speckled" that were his own perquisite. But it is only in modern times that these principles have been

extensively developed and the various collateral principles applied to the formation of distinct and improved breeds of the various domesticated animals. Indeed, with the exception of the thoroughbred running horse, which has been systematically bred in England for more than two centuries, none of our improved breeds have a history of much more than one hundred years of conscious, systematic selection with a view to certain ends. Some may have existed as breeds for a much longer time, but their existence has been due more to environment than to conscious design on the part of their owners.

To a correct appreciation of the value of a thoroughbred animal, it is essential to know how the breed has been formed. What means did the originators of those various breeds use in order to produce a succession of generations every member of which possessed the desirable characteristics in a marked degree? If we look into the history of the various improved breeds for an answer to this question, we will find in almost all cases three prominent means have been used to this end:

- (a.) Close in-and-in breeding.
- (b.) Rigid selection of the type desired.
- (c.) A forcing of development from birth by means of an abundance of nutritious food, comfortable quarters in winter, and careful attention at all times.

The question of in-and-in breeding has probably provoked more discussion than any other subject connected with the breeding and management of live-stock, and there have been so many able writers on both sides of the question that the subject may well be considered as unsettled as ever. This much, however, is certain. We know that nearly all of our improved breeds of cattle have been more or less interbred. The bull Hubback and some half-dozen cows, in the hands of Charles and Robert Colling, may be said to have produced the Short Horn breed of cattle. A very small number of sheep, intimately bred together by Bakewell, gave rise to the Leicesters.

The Herefords are said to have descended from two cows in the herd of Benjamin Tompkins, only one of which had a white face. The improvement in the Essex, and through it the Berkshire, pig is undoubtedly due to the influence of a single pair of black Neapolitan hogs imported by Lord Western. Our own matchless Poland Chinas originated in a small county in Ohio, and were at

first closely interbred, and to-day the descendants of the old Harkrader sow are found in nearly every State and Territory north of Mason and Dixon's line. Many other instances of inbreeding might be cited; but what is of particular interest to us is whether under any circumstances the breeder of to-day will improve his stock by resorting to inbreeding. I have no hesitancy in saying that there are many cases where inbreeding will be the best course to pursue, but it will in no case succeed unless the breeder has in his mind an exceedingly clear idea of the ends he wishes to attain, and will, by weeding out, hold himself rigidly to the attainment of his purposes. Perhaps an illustration and comparison of two actual cases that have occurred in this country within comparatively recent times will give a better idea of my meaning than any mere statement I might make.

In 1861, Mr. Winthrop W. Chenery, of Belmont, Mass., imported from Holland one bull and four cows of the breed now known as the Holstein-Friesian. He had previously made importations of the same breed, but had imported with them the pleuropneumonia, and had saved of the entire importation only one young bull, Second Dutchman 37. He had then two bulls and four cows as the foundation of his herd, and there were no others of the breed in the country. Since importation was expensive, and it was desirable to determine the adaptability of the cattle to our climate before venturing further, Mr. Chenery was forced to interbreed his cattle in order to maintain the purity of the blood. Mr. Chenery evidently considered inbreeding in the light of a deadly sin, and though forced into it in order to keep his herd pure, determined to fight as shy of it as possible, and use all possible permutations and combinations of his two bulls and four cows so that their progeny should be as little related as possible. I have traced for you an example of his manner of breeding in the bull Fifth Prince of Orange:

We see that this bull, though only in the fifth generation, contains the blood of all the animals originally imported. Moreover he is an essentially inbred animal, but only inbred because there was no longer a chance for other combinations. Texelaar appears three times in his pedigree. Second Dutchman and Maid of Oppendoes twice each. Now what was the result of this method of breeding? All of the animals originally imported by Mr. Chenery are said to have been remarkably good ones, but of somewhat different characteristics. All were excellent milkers. The milk of Texelaar was the richest, though not the most abundant. Maid of Oppendoes had more tendency to take on flesh rapidly. The result was by this system of mixing and then interbreeding, the characteristics of none were fixed. In his desire to avoid something that he could not help, Mr. Chenery had produced a family of animals that were remarkable for nothing at all, were incapable of reproducing their own characteristics, and when bred to other animals could not reproduce the characteristics of their ancestors. Besides, this method of inbreeding had proven ruinous to their constitutions, and although the original animals of Mr. Chenery's importation were probably as good as could have been imported, their effect on the breed at large has almost entirely disappeared.

Mr. Chenery never bred an animal that was the equal of Texelaar or Lady Midwold.

In 1861, Colonel Richard M. Hoe, the inventor of the Hoe printing press, became interested in the breeding of Jersey cattle, and gave an order to a business friend on the Island of Jersey, for a bull and a half dozen of heifers, not limiting him as to price. At this time interest in the Jerseys was just beginning to awaken, and other importers were limiting their agents to a first cost of twenty-five dollars each. The six heifers and bull of Colonel Hoe cost him on the island between ninety-five dollars and one hundred dollars apiece. Here we find that Mr. Hoe was in much the same condition as Mr. Chenery. He had a few choice animals whose blood he was desirous of keeping pure, and there was no available source from which he could obtain fresh blood. Of his six heifers, two, Edith and Rhea, proved to be superior butter cows. Edith, he had, according to arrangement, sold to his friend, Mr. Faile. Rhea had very similar characteristics with the bull Saturn, and

imported from an English herd that had long been known for its butter qualities, produced the famous cow Eurotas that long stood at the head of butter producers in this country, and she in turn, when bred back to Sarpedon, a pure Alpheia bull, produced Duke of Darlington, the sire of Bomba, the first cow to stand an official test of over twenty pounds of butter in a week. Very many of the best Jerseys in the country trace their lineage to the Alpheia stock and undoubtedly owe much of their good qualities to the heroic inbreeding of Mr. Hoe. It seems to me that a very plain lesson can be drawn from the history of these two herds of different breeds of cattle. In the one we see the results of systematic inbreeding, in intensifying the characteristics of an already well-established breed. In the other we see that haphazard inbreeding is attended with degeneration in a breed equally well-established. It seems to me that we are quite safe in assuming that had Mr. Chenery had control of the Jerseys and Mr. Hoe the Holsteins, the results would have been exactly reversed.

There are very many persons who, although opposed to inbreeding, are strong advocates of what is called breeding in the line, that is, breeding from animals that, although not strictly related are descended from common ancestors a few generations back. There is no doubt but that line breeding, if carefully attended to, is one of the best methods of grading up a herd, but as it is often practiced, in-and-inbreeding would be far preferable. Let us take an illustration: Suppose a breeder to have a herd of cows of only moderate individual merit, most of which are strikingly deficient in one or more of the prominent characteristics of the breed. We will suppose the owner to have become possessed of a bull of great individual merit and remarkable prepotency. All his calves bear a striking resemblance to him and are in nearly every case superior to their dam. After having used such a bull for two or three years the breeder will find that a considerable portion of his herd is made up of the daughters of his bull, and it becomes a question of importance as to how they shall be bred. If he is an advocate of line breeding, he will look around to find another bull of the same family as the one he has been using, and be satisfied with that alone. But here is where the great element of danger comes in. If heifers of this kind are bred to a bull of the same family as their sire, defects are more likely to appear in their offspring than if bred to their sire himself, especially if such bull should

happen to have inherited similar defects from some of his ancestors in other lines. Such heifers are in reality not thoroughbred in the true sense of the word. Their merit is obtained almost wholly from their sire, not from a long line of ancestors on both sides, and until such merit is fixed by inbreeding, defects will be very likely to appear in their offspring.

To all who are similarly situated I should unhesitatingly recommend the use of "the double top-cross," that is, breed the heifers to their own sire:

THE "DOUBLE TOP-CROSS."

Daisy 3d.....	{ Captain.	
	{ Daisy 2d.....	{ Captain.
		{ Daisy.

I have already outlined my reasons for this; but let me briefly repeat: A bull of strong constitution, that uniformly reproduces his own good qualities in his offspring from a mixed lot of cows, can, with almost unerring certainty, be depended upon to produce the same qualities in an intensified form from his own daughters, and no degeneration or weakening of constitution need be feared.

To sum up then, a thoroughbred animal is one of superior individual merit, all of whose ancestors, for many generations, have possessed the same merits to a high degree. The value of such an animal consists in its power to stamp its own merits upon its offspring, no matter what the other parent may be.

And now we come to our special plea for the thoroughbred sire as the best animal for the ordinary farmer, who must look to the products of his animals in butter, beef, wool, mutton or pork for his profits. The value of a thoroughbred to such a man is the production of grades. For it is to grades, and grades alone, that we shall long look for profitable production of all the various products for which live stock is kept, and that this is the road for the ordinary farmer to travel is well pointed out by the numerous successful followers of such a policy.

When our ordinary farmer comes to the selection of his thoroughbred sire, the breeder will undoubtedly expatiate largely upon his pedigree; but how very few have a proper appreciation of the value of pedigree. Very many, who imagine that they place much dependence on pedigree, place their dependence merely on its length. Some of the longest pedigrees are the very poorest.

A pedigree is a chain, and, like a chain, is no stronger than its weakest link; but, unlike a chain, the position of the weak link will have much to do with the strength of the whole. To justly estimate the value of pedigrees, we must not only know the names of the various animals comprising it, but we should know the life history of those animals; whether they were of great individual merit; whether they were good feeders, milkers or butter-makers; whether they were hardy and of robust constitution; whether they were prolific breeders, and if their offspring were like them. A good pedigree is not necessarily a fancy one. Any animal whose ancestors in every line have been animals of high individual merit, has a good pedigree, and such an animal alone is entitled to the term thoroughbred. In this limited sense we would have very few thoroughbred animals, and yet I am quite sure that the term should be so limited. There has been much said as to the weight that should be given to pedigree and to individual merit in choosing an animal, but the two are as intimately connected as flowers and fruit. Without individual merit the best pedigree is but a rope of sand; without pedigree the best animal in the world can not be expected to reproduce itself, except in occasional instances.

One point I wish to make especially strong. Do not delude yourselves with the idea that you will find an improved breed that will continue to give you better results than your scrubs with the same feed and care that you have given your scrubs. Scrub care given to thoroughbreds or grades is a hundredfold worse practice than leaving your improved machinery to the action of the weather; thoroughbred care given to a scrub is money and labor thrown away. The scrub farmer will always have scrub cattle; no matter in what herd book they are recorded, the grade farmer, grades; and the thoroughbred farmer, thoroughbreds. But while the scrub animal will always remain a scrub, and while the grade may never technically become a thoroughbred, the "scrub" farmer has it in his own power, if he is in earnest about the matter, to lift himself from the ranks of the "scrub" into those of the "grade" and the "thoroughbred."

Secretary Shull read a communication from Major Alvord, of Maryland Agricultural College, expressing regrets in not being able to attend the convention.

President SHATTUCK.—Ladies and Gentlemen: Circumstances make it necessary that I should leave this convention at the adjournment to-day noon. I should be glad to remain with you until the close of this meeting, and, in as much as this session will close my official connection with the association, I desire to tender my thanks to you all; to the officers of the association, and to all who are connected with it, for the very pleasant meetings we have enjoyed together, and for the courtesy that has ever been extended to me by all who have been associated with me in the transaction of business, and in our personal relations.

Recess until 1.30 P. M.

AFTERNOON SESSION.

President-elect I. P. Roberts called the convention to order at 1.30 P. M.

Cheese from Lyon Brook factory was produced and sampled by the audience and declared to be fine and desirable.

The chair announced the order of business, an address on

BUTTER-MAKING.

[By E. S. MUNSON, of Franklin, N. Y.]

Mr. President, Ladies and Gentlemen: I ask your attention to the subject of butter and butter-making. The subject is not new, neither does it seem to get too old for profitable discussion. It certainly must hold an important place in all dairymen's meetings.

It is a fact that in the larger number of private butter dairies of the State imperfect and faulty butter is made, and it is wonderful that it is so, in view of the fact that so much has been said and written on the subject. How shall we remedy this defect while there are so many who know all there is to be learned about butter-making and still follow the old practice?

In Delaware county we have had a live dairyman's association for ten years, and a meeting of the State Dairymen's Association and a number of dairy conferences have been held, and yet I doubt if you can find five dairies of adjoining farms that would be classed as fine by critical judges. Why is this lack? Is it because your butter-makers know all there is to be known of butter-making? Is it on account of the expense or outlay that they will not keep pace with the improvements of the day? And here allow me to quote a rhyme which seems to be applicable in

this connection and which it would be well for every dairyman to chalk down. It reads thus :

“Spare not nor spend too much, be this thy care ;
Spare but to spend and only spend to spare ;
Who spends too much may want and so complain ;
He spends best who spends to spare again.”

There is enough in these few lines, if the lesson taught should be strictly acted upon, to almost double the butter product of half the dairy farms of the State, and add ten per cent per pound to the value. No person ever succeeded in being niggardly in spending money to develop and perfect a business. We can call to mind many overworked dairymen, slaving and toiling in setting milk to cream in the old-fashioned shallow pans. In doing so they are wasting in quantity and quality of butter during the warm summer season to more than pay for improved cream-raising apparatus ; and more, they are doing three times the work than is required by an improved system. Then there also is the old dash-churn, with the cream bespattered all over the churn and the floor. Now, this means waste in cream as well as loss by the raising of the cream and also the extra labor. Now, let it be written in large letters, “Spare not nor spend too much,” for it is “written upon the wall” that money spent for dairy apparatus means money in the bank and more smiles on the wife’s brow.

I am ashamed to say that we have in Delaware county the old-fashioned shallow pans and the dash-churn. I would prefer to say this much in a whisper.

I have another reason why a higher standard is not attained in the quality of butter : It is false pride by many to acknowledge their inexperience and the lack of necessary knowledge. To such I would advise to take a day and visit some neighbor who has the reputation of making good butter and learn their process, and make use of so much thereof as may seem advantageous to you.

In my remarks thus far I have had more particular reference to private dairies.

I will now come to the question of butter-making proper, by giving certain rules coming under my observation, which I would suggest to make good, sweet butter :

First. Set milk in deep cans, and, if practicable, in a vat of running spring water. The water should not be at a higher

temperature than fifty degrees. It is not essential that the cans should be submerged, provided the room is kept clean and surrounding air sweet and pure. If the cans are to be submerged the covers should be left off until the milk is cooled down to seventy-five degrees or less, to allow the animal odor to pass off, or if the covers are corrugated, as in the improved Cooley system, then the covers may be immediately put on, as the odor will pass to and be absorbed by the water. If running cold water can not be provided, then ice must, necessarily, be used; but it is thought by many that the milk should not be cooled below forty degrees, else the keeping qualities of the butter produced will be injured. Deep-setting is preferable to shallow, as one can thus hold a more perfect control of the changing process of the milk and cream, and it is also an economy of space.

Second. Skim immediately after the cream is all up. It will be found in practice, when milk is set for cream-raising as above, that the cream will all be up and can be taken off at thirty-six hours setting or less, depending upon the temperature of the water in which it is set. To every ten quarts of cream taken off take one or more quarts of milk with it. Milk churned with the cream tends to lessen the danger of a salvy product, and give a cleaner separation of the butter from the caseous particles.

Third. Hold the cream at the same temperature as when taken off, or lower, until enough has accumulated for a churning. This can be done by putting it into large deep cream pails, or common milk coolers, and setting in a vat of water provided for that purpose. After enough has been taken off for a churning, put the whole into a cream vat, for ripening, and mix thoroughly. The vat should be double and of large surface, and so constructed that the cream may be heated or cooled by surrounding water, with the least amount of labor. It should be frequently, though not violently, stirred. The large surface is essential in order to properly and more thoroughly oxidize the cream. Cream will take that flavor which is afterwards carried forward to the butter product from exposure to the air, more readily, and should thus be ripened, at about the churning temperature, which, raised as above, will be found to be sixty-three to sixty-five degrees. To insure against danger of the cream absorbing injurious odors while ripening it is advisable to keep the room colder than the cream, if practicable, and as free as possible from all impurities.

Fourth. Churn when the cream is neither too sweet nor too sour. That is to say, a mistake is possible either way. Cream ripened moderately at churning temperature may be churned when not so sour as it should be if acidity has been more rapid in its development. Ripeness of cream for churning and its acidity may not always present themselves in the same order as to time. They may arrive at a certain point generally at the same time, yet not always, because they come by different routes, and travel each independent of the other. Hence, the mixing of very sour cream or milk with sweet cream, in order to hasten the ripening of the sweet cream, is not to be commended. Acidity in cream may serve us well and truly as an index to its ripeness for the churn, but it ceases to be a truthful one if foreign germs of fermentation are brought to bear in the case.

Fifth. Use a revolving churn. Do not run it too rapidly. No part of the process of making butter can be advantageously forced. If the churn is a self-ventilating one it will save the trouble of stopping to allow the condensed air to pass off, which is occasioned by the swelling of the cream.

Sixth. Stop the churn when the butter has gathered to granules the size of wheat or corn kernel. Draw off three-fourths of the buttermilk and replace it by double the quantity of cold water. The water should be as cold as that used in raising the cream. Stir with a paddle or revolve the churn a few times. Then draw off all the water and buttermilk that will readily run off and replace by an equal amount of water. Repeat the process until the water runs off clear. Three washings will suffice if the process, thus far, has been properly conducted.

Seventh. Salt in the churn as to taste or market requirements. The particular kind of salt to use in salting butter is one of the questions we should leave to the men who buy our butter from us or sell our butter for us. One pound of salt to fourteen pounds of butter will be found to prove about the right proportion, depending upon the amount of water left in the churn at the last washing. The churn should be set in motion after adding the salt and allowed to make forty to sixty revolutions, or until the butter has become pretty thoroughly massed. Experience will soon make rules for this part of the process. It can make little difference whether butter is salted in the churn or on the butter-worker, if it is thoroughly distributed, and the butter is not over-

worked. It can be salted in the churn in much less time and with much less labor than upon the worker. If intended for immediate or weekly consumption the butter can be packed immediately after salting. If intended to hold for a fall or winter market, it should be either left in the churn, or taken out into trays, and kept for a few hours, when it can be slightly worked and packed.

Eighth. Keep in a cool cellar covered either with brine or an inch of dampened salt well packed, and sell it when you please. You may hit the market at its highest point, and then, again, you may not. If you do, call it your own sagacity, but don't get too vain. Try your sagacity for a number of years and see if it will always serve you so well.

Now, there you have my rules or directions for butter-making, in a nutshell. I have been careful to give them in a condensed form, that reference to them may more readily be made. I know very well that good, and equally good, butter can be made by methods essentially different from those which I have pointed out. My aim has been to point out a process by which good results can certainly be reached. And mainly it is the results we are after, and are not wedded to any particular system.

I have purposely avoided the discussion of the scientific principles involved for certain reasons. One that I very well know, that in the promiscuous discussion expected to follow, many more capable men than myself will be likely to take part, and enforce their criticisms by arguments from a scientific standpoint. It is in the criticisms on an article on butter that we have reason to expect the greatest benefits. Moreover, it is not so very important in butter-making that we who make butter should know all the chemical science and philosophical laws which play their important part. The process is susceptible of almost perfect control by specific rules. I may learn the time of day by looking at the hands of my watch, and yet know nothing of the arrangement of the little wheels within it.

Not all good butter-makers can be expected to know and understand all the scientific reasons why certain surroundings produce certain results. It is not necessary, though it would certainly be agreeable, for every good butter-maker to be a graduate of a high school or college, yet the world is full of recognizable conditions which have no entirely satisfactory explanations, and we dairymen may well take some things on trust.

Now, in conclusion, permit me to say that my remarks have been intended to refer principally to private butter dairying, and to making butter intended to possess long-keeping qualities. Sweet cream butter, and buttermilk butter, intended for a special trade, which must go into consumption as quickly as possible after leaving the churn, I have left to be discussed by those having more knowledge upon that special branch of the subject.

Creameries are reasonably expected to take care of themselves, but in a certain butter market report for November twentieth, they say: "State creamery lacks flavor, and having only freshness to commend it to the trade, prices vary widely."

Lacks flavor, does it? And yet men of science, men who certainly ought to know and do know, tell us that flavor in butter is free—"as free as salvation"—as free as the air we breathe. (See Report of Cornell Experiment Station.) I have already made this article too lengthy, and must close, but I beg leave to suggest to our creamery managers that quite likely they have failed in their management to command the desirable flavor.

Allow me, Mr. President, to suggest that if any remarks are to be called for upon the subject treated in this article, that they should be called out in their regular order, viz.:

1. Milk setting and skimming.
2. Cream ripening.
3. Churning and washing.
4. Salting and working.
5. Packing and preserving.
6. Marketing.

Professor ROBERTSON.—Washing butter at too low a temperature will carry off the volatile oils. Wash in a granulated state with water at from fifty to fifty-five degrees; never above, nor never below fifty degrees. A lower temperature leaves too much water in the butter, and injures it. Would salt butter by mixing the salt in the butter when in granulated state. A temperature of fifty-five degrees is the best to work butter.

Mr. E. L. BASS.—Butter can be injured by overworking. The less butter is worked, if the water is removed, the better the butter.

Professor ROBERTSON.—Would work the butter as little as possible. Would also churn the cream at as low a temperature as possible.

Mr. OLMSTEAD.—I would recommend the marketing of butter as soon as possible after it is made, and get it into consumption.

Professor ROBERTSON.—Sweet and sour cream will not work together. By churning sweet, twenty-three per cent goes into the buttermilk. Cream from open setting of milk does not require so much time for ripening as that of submerged. Cream should be stirred frequently while ripening.

Mr. MUNSON, chairman of special committee on implements, made the following report:

Your committee, appointed to examine the dairy implements on exhibition, respectfully report that we find on exhibition one Mosley & Stoddard creamer, for milk-setting and cream-raising, and one Stoddard revolving barrel-shaped churn, both of which have been so long in use and so generally approved and indorsed, that they need no special recommendation from this committee. We also find on exhibition a milk aerator and cooler, exhibited by D. M. McPherson. Your committee feel justified in making special mention, inasmuch as it appears to be well calculated to do excellent work in the very important matter of milk aeration and cooling.

We find another, exhibited by or called the E. L. Hill aerator. This implement seems to be particularly intended for milk aeration by forcing air through the milk. Your committee do not feel justified, without experimental knowledge, in offering any expression of comparative merit.

We found also on exhibition the well-known Hansen butter and cheese color, which stands unrivaled as an artificial coloring for butter and cheese.

Mr. B. D. GILBERT, chairman of the committee on resolutions, reported the following:

Resolved, That the members of this association desire to tender to our retiring president, Mr. John S. Shattuck, their hearty thanks for his faithful services in presiding over our deliberations during the last two years. We fully appreciate the promptness and efficiency with which he has dispatched the business of our conventions, and the harmony he has always maintained among us. We trust that prosperity and good fortune may continue to attend him in his future career.

Resolved, That we extend our congratulations to the committee of gentlemen who have so generously and handsomely provided us with a place of meeting, and who have so carefully looked after our conveniences and comfort during our sojourn in their pleasant city.

Resolved, That we hereby express our obligations to the D., L. and W., the Ontario and Western, and the R., W. and O. railroads for the courtesy they have shown us in reducing fares over their lines.

Resolved, That this association request of the incoming administration the appointment of a commissioner of internal revenue and a commissioner of agriculture, men who are known to be in full accord with the vast dairy interests of the United States, and men by whom the diversified live stock interests of this country will be managed in a just and wise manner to protect all the producers of genuine butter and lard, and the great body of consumers who do not want to be defrauded in their purchase of foods.

Second. Seeing the marked and beneficent effect of the work done by the State Agricultural Society through farmers' institutes, we most earnestly recommend that its work be continued on the general lines already pursued. We believe that this work is not only necessary, but a valuable preparation for the more detailed and practical work of the State Dairymen's Association, and that of the Dairy Commissioner.

Third. In view of the work done through our Dairy Commission in sending out experts as inspectors of factories and milk, and giving instruction in the manufacture of butter and cheese, we would recommend that this work be continued, and if the fund will justify, we advise putting more men in the field; especially do we see the needs of the services of an expert chemist in connection with the butter and cheese-makers, in order that instruction may be given, not only in the art of dairy husbandry but in the science as well.

We also most earnestly recommend that ample means be afforded to the Dairy Commissioner to continue in the urgent effective way, the most vigilant and persistent efforts to execute the laws of this State regarding the manufacture and sale of oleomargarine, and to prevent the same and all adulterations of dairy products.

We further recommend that a law be enacted giving the Dairy Commissioner power to investigate all cases of the sale of dairy products when consigned to commission merchants or other dealers to be sold on commission, whenever complaints are made of supposed fraud in the sale or in the returns made to the consignee.

The secretary announced the business of the convention finished.

At 4.30 P. M., the chair declared the convention adjourned *sine die*.

NOTES ON DAIRYING.

By Professor JAMES W. ROBERTSON, Ontario Agricultural College,
Guelph, Canada.

The business of dairying, when intelligently and carefully followed, insures to the farmer a safe and steady income. The permanent success of the dairy industry depends upon the quality of the product. Every dairy farmer is, or should be, interested in its improvement. To help in that direction is the purpose of these notes. In producing and supplying milk to cheese factories and creameries the following points require attention in order that the best results may be obtained.

GENERAL RULES.

1. Milk from healthy cows only should be used, and not until at least four days after calving.

2. Any harsh treatment that excites the cow lessens the quantity and injures the quality of her yield.

3. Cows should be allowed an abundant supply of wholesome, suitable food, and as much pure water as they will drink.

4. A supply of salt should be placed where cows have access to it every day.

5. Cows should not be permitted to drink stagnant, impure water, nor to eat cleanings from horse stables, leeks, turnip tops, nor anything that would give the milk an offensive taint.

6. All milk vessels should be thoroughly cleaned; first being well washed, scalded with boiling water, and afterwards sufficiently aired to keep them perfectly sweet.

7. Cows should be milked with dry hands, and only after the udders have been washed or well brushed.

8. Milking should be done, and milk should be kept only where the surrounding air is pure and free from all objectionable and tainting odors. Milking in a foul smelling stable or yard imparts to milk an injurious taint. Sour whey should never be fed, nor should hogs be kept in a milking yard nor near a milk stand.

9. Tin pails only should be used.

10. All milk should be properly strained immediately after milking, and for that purpose a detached strainer is preferable to a strainer pail.

FOR CHEESE FACTORIES.

11. In preparing milk for delivery to a cheese factory it should immediately after straining, be thoroughly aired by pouring, dipping or stirring. This treatment is as beneficial for the morning's milk as for the evening's, and is even more necessary when the weather is cool than when it is warm.

12. In warm weather all milk should be cooled after it has been aired, but not before.

13. Milk kept over night in small quantities — say in tin pails — will be in better condition than if kept in larger quantity in one vessel.

14. When both messes of milk are conveyed to the factory in one can, the mixing of the morning milk with the evening milk should be delayed till the wagon reaches the milk stand.

15. While the milk is warmer than the surrounding air it should be left uncovered, but when colder it may with advantage be covered.

16. Milk pails and cans should be protected from the rain; and milk stands should be constructed to shade the cans from the sun.

17. Only honest milk with its full cream and full share of stripings should be offered; violation of this requirement leaves the patron liable to a heavy penalty.

FOR CREAMERIES.

18. In preparing milk for delivery once a day to a creamery where the whole milk is received, the treatment should be similar to that recommended for cheese factories.

19. For creameries receiving cream only, the milk should be well aired but not cooled before setting.

20. Milk should be set for the separation of the cream, where no impure air will reach it.

21. Cream rises best with a falling temperature, and the separation of cream from milk is promoted by cooling, after setting to at least forty degrees Fahrenheit.

FOR BUTTER MAKING AT FARM DAIRIES.

22. When the cream is used for butter making at the farm, the foregoing treatment and conditions may be observed with profit.

23. Good ventilation for a milk-house, milk-cellar or dairy-room, is most essential, and may be provided for by leading an air drain under ground, for say 200 feet. Through it a supply of pure, fresh, cool air may be admitted. The foul, or warm air may be allowed to escape through ventilators, or windows in or near the ceiling.

24. Cream should invariably be removed from the milk before the milk is sour.

25. The cream for each churning should be gathered into and kept in one vessel.

26. The whole of the cream should be well stirred every time fresh cream is added.

27. In summer, cream should not be left longer than three days before churning, and should be slightly soured.

28. The best churning temperatures are between fifty-seven degrees and sixty degrees during the summer, and sixty degrees and sixty-four degrees during the winter.

29. Butter can be more thoroughly washed free from butter-milk while in the granular condition than after it is gathered or pressed into a roll.

30. Only the best pure salt of medium and uniform fineness of grain should be used, and from three-quarters to one ounce of salt per pound of butter will be found satisfactory for the summer.

31. The utmost cleanliness in milking, in vessels, in utensils, and in all surroundings must be observed to preserve the flavor and body of milk, cream, butter and cheese from contamination.

HINTS ON CHEESE-MAKING AND CHEESE-MAKERS.

1. Use every endeavor to educate your patrons how to produce milk of the best quality, with the most profit.

2. Give each one a copy of "Points for the Attention of Patrons of Cheese Factories."

3. Carefully inspect the milk-cans, especially the seams inside the covers, once every week; any offensive matter appearing yellow when wet with milk is most dangerous to the flavor and keeping qualities of the cheese.

4. Insist on a careful straining immediately after milking.

5. Send a circular or note to every patron two or three times a year, urging care in the airing of all milk.

6. Visit promptly the farm, pasture, stable, milking-yard, milk-house and milk-stand of every patron whose milk comes tainted, after he has been notified of its bad quality; some apparently trivial matter that has escaped attention will generally be found as the cause.

7. Where whey is returned in the milk-cans, urge the owners to empty them as soon as received, and not to feed the whey near a milk-stand, milking-yard or other place where milk is kept.

8. Examine carefully the inside and outside of the opening from the weighing can into the milk conductor; and just after using look into the conductor very closely for any traces of the yellow matter referred to in No. 3.

9. Do that every day.

10. Entertain a "creepy dislike" for the use of a strainer, cloth, dipper, pail or thermometer which feels greasy, or that has a miser's store of matter-out-of-place in the corners.

11. Lift the pans of the milk vats out of their places for a thorough cleaning of the water-pans once a fortnight.

12. Eighty-four or eighty-six degrees Fahrenheit are satisfactory setting temperatures when the milk is in good condition.

13. Over-ripe or acid milk may with advantage be set as high as ninety-six degrees, according to the degree of its ripeness. See also 31.

14. Let the milk be well matured by the retention or application of heat before the rennet is added.

15. If the milk is delivered to the factory in too sweet a condition, it should at once be heated to ninety-four degrees and frequently stirred.

16. According to the degree of its sweetness it may be left to gradually cool down to eighty-eight degrees during two to four hours.

17. The addition of sour whey to hasten the maturing is most objectionable and should never be resorted to.

18. Old milk, which has become well ripened, and nearly sour to the taste, may be added, but loppered or thick milk should never be used.

19. In the use of coloring, the annatto extract should be diluted to the extent of one gallon of water to every vatful of milk, and then thoroughly stirred in.

20. Pure rennet extract or powder of known strength is indispensable.

21. The quantity used should be regulated according to the condition of the milk.

22. Rennet should be diluted to the volume of at least one gallon of liquid for every vat before being added to the milk.

23. The first discernible action of rennet is to coagulate the milk into curd.

24. To perfectly coagulate the milk from fresh calved cows, more rennet is required than later in their milking season.

25. The more rennet there is used the more moisture will there be retained in the cheese under similar conditions of making.

26. The more moisture there is retained in the cheese the more quickly will it cure under equal condition of temperature and atmosphere.

27. For spring cheese as much rennet should be used as will thicken for cutting in from fifteen to twenty minutes at a temperature of eighty-six degrees.

28. For summer and fall cheese forty-five minutes should be allowed for the same process, with milk in good condition.

29. The second evident action of rennet is to effect a separation of moisture out of the curd particles.

30. The raising of the temperature up to ninety-eight degrees Fahrenheit provides increasingly favorable conditions, and thus promotes the rennet action.

31. When milk is over-ripe or acid, a proportionately increased quantity of rennet should be used to effect a sufficient separation of the moisture from the curd (often termed "cooking") before the presence of lactic acid is perceptible to the taste or smell, or is discernible by the hot-iron test. See, also, No. 13.

32. Observation of the foregoing would remedy many so-called mushy curds and avoid the danger of leakers.

33. Rennet should be diluted to the volume of at least one gallon of liquid for every vat before being added to the milk.

34. It should be thoroughly mixed by vigorous stirring, otherwise coagulation will be very imperfect.

35. The results of late investigation recommend an allowing of the curd to become fairly firm before commencing to cut, except in the case of a quick curd.

36. More moisture is retained in the cheese, and a better yield is thus obtained. See, also, 26.

37. The horizontal knife should be used first, lengthwise, and then followed by the perpendicular knife, crosswise, after the whey has separated to half cover the curd.

38. The mesh of the knives should be so close that three cuttings would suffice, except in the case of a quick curd, which should be cut unusually fine.

39. The knives should be moved fast enough to prevent much disturbance of the curd by pushing.

40. After coagulation is perfect, the curd should be cut finer during the late fall than during the summer months.

41. Gentle and slow stirring should begin immediately after the cutting is completed.

42. The hand should be used to free the sides and bottom of the pan from any curd that may have adhered.

43. The application of heat should be delayed for fifteen minutes after stirring is commenced.

44. The heat should be applied through the medium of warm water to avoid scorching the curd.

45. The temperature should be gradually raised to ninety-eight degrees Fahrenheit, at a rate not faster than one degree every four or five minutes.

46. In the case of a quick curd, Nos. 43 and 45 may be disregarded.

47. Pains should be taken to make the curd particles so dry before the development of acid is perceptible that after being pressed in the hand and released they fall apart when slightly disturbed.

48. Stirring should be continued till the curd is properly "firmed" or "dried."

49. The temperature should be maintained at ninety-eight degrees until the whey is drawn off.

50. When the hot-iron test shows fine hairs, from one-fourth to one-eighth of an inch long, the whey should be removed.

51. If acid is discernible by the hot-iron test before the curd is so properly "firmed," the whey should be immediately removed and the stirring continued till that firm condition is brought about.

52. In both cases the dry curd should be kept at a temperature above ninety-two degrees Fahrenheit.

53. The presence of too much moisture in the curd while the acid is developing is the cause of tenderness of body and pastiness in cheese.

54. If the temperature be allowed to fall below ninety-two degrees the development of acid is retarded and excessive moisture is retained in the curd during its development.

55. The presence of such extra moisture in the curd at this stage will leave the cheese with a weak or pasty or tallowy body, according to the degrees of acid development permitted.

56. A rack placed in the vat seems the simplest and most effective provision for keeping the curd warm without risk of scorching.

57. Just after the removal of the whey the curd should be hand-stirred till the free moisture has drained off.

58. After the curd is dry or firm enough, but not before, it may be allowed to mat into one mass.

59. It should be frequently turned and packed close, till the layers of curd are four or five deep.

60. Whey should never be allowed to gather in small pools on the curd at this stage.

61. The close packing in layers four or five deep, with frequent turnings, prevents the outside of the matted pieces from becoming chilled or more deeply colored than the rest of the curd.

62. The conditions of the curd, as to when ready for cutting and salting, are best ascertained by the use of the senses. The usual order of reliability for that purpose is by touch, smell, taste and appearance.

63. The proper degree of change has taken place when the curd feels mellow, velvety and greasy; smells like new-made butter from sour cream; tastes aromatic rather than sour, and shows a texture passing from the flaky or leafy into the stringy and fibrous.

64. When the curd is gasey or very porous, souring should be allowed to go further before it is arrested by the cutting and salting.

65. If the curd be too moist or soft it should be cut or ground at a rather earlier stage, and hand stirred some time before the addition of salt.

66. In both of those cases it should also be well aired by stirring before being salted.

67. It is generally beneficial to stir the curd for ten minutes after cutting or grinding before the salt is applied.

68. The results of the tests made last season (1886) for the Western Ontario Dairymen's Association, indicate that Canadian salt is better for cheese-making purposes than English salt.

69. One pound and three-quarters of pure salt per 1,000 pounds of milk is a maximum quantity for April and early May cheese.

70. From two pounds to two and three-quarter pounds of salt per 1,000 pounds of milk is the range for summer use on fairly dried curds, and from three pounds to three and one-half pounds during October and November.

71. Where extra rennet has been used, or where the curd is sloppy, a corresponding increase of salt should be applied.

72. One important action of salt is to dry the curd and cheese, and thus retard the curing.

73. The curd should be hooped and pressure applied within twenty to forty-five minutes after the salt is stirred in.

74. Delay at this stage or coldness of curd destroys the desirable rosy flavor and imparts to the cheese the bitter taste of the salty white whey.

75. Immediately after the application of salt the pieces of curd become harsh and gritty on their surface; then in from fifteen to twenty-five minutes the harshness gives place to mellowness and the salt causes the whey to separate freely.

76. Pressure in the hoops should be continuous, at first light and gradually increasing.

77. The followers should be loose fitting, and canvas press rings used.

78. Particular care should be taken to use only pure, warm water when turning the cheese for bandaging, before the rinds are fully formed.

79. Greasy water is sure to percolate into the body of the cheese and leave nasty flavors.

80. The curdcutter or grinder must be thoroughly cleaned every day; wretchedly bad flavors are frequently sown into cheese from neglect of this.

81. Curd sinks should be furnished with racks having slats beveled to an edge from both sides.

82. The racks need thorough scrubbing on both sides every day, and should be turned out for airing over night.

83. A sink cloth that shows clogging by yellow matter should be burned at once.

84. Occasional soaking over night in a strong sal-soda solution is beneficial.

85. The curd whisk has been a fruitful scatterer of bad flavors ; a hair brush is more easily kept clean.

86. The hoops and press tables require to be rinsed with hot water every day, and scrubbed on both sides.

87. All cheese should be turned in the hoops in the morning, to give finish to the shape and body.

88. The press cloths should be left on for a fortnight, or till within a few days of the time of shipment.

89. No cheese should be taken to the curing-room till the shape is true and the edges well made.

90. The cheese should be turned on the shelves once a day till at least three weeks old.

91. The curing-room floor should be frequently swept, the shelves thoroughly cleaned after each shipment, and the air kept pure by suitable ventilation.

92. The curing is effected by fermentation, while heat up to seventy degrees makes a favorable condition, and cold under sixty degrees an unfavorable condition for its operation.

93. A temperature of from seventy degrees to seventy-five degrees Fahrenheit should be maintained for curing spring cheese.

94. From sixty-five degrees to seventy degrees Fahrenheit is the best range of temperature for the curing of summer and fall cheese.

95. In the curing-room a temperature of from sixty-five degrees to seventy degrees should be maintained continuously.

96. Where the room is heated by a stove, the following simple device will help to equalize the temperature over the whole and save fuel :

97. A tin jacket should be placed so as to surround the stove at a distance of eight inches all around.

98. Let the jacket stand eight inches from the floor, and extend eight or twelve inches above the stove, according to its size.

99. A light rope attached to the jacket and then passing around a pulley fixed to the ceiling will provide for its being lifted out of the way when fresh fuel is being added.

100. The air between the stove and the jacket on being heated at once ascends; the colder air from below is drawn up, and a continuous movement of warm air along the upper part of the room is established away from the stove, with the complementary circulation of colder air near the floor towards the stove.

101. When press cloths are stripped off, use warm (but not hot) pure sweet flavored grease on the rinds.

102. Just before boxing summer cheese grease them, and apply scale-boards while the grease is still soft.

103. Mark the weight of cheese in neat figures on the hollow side of the box.

104. Let there be two scale-boards on each end of the cheese in the box.

105. The edge of the box should be level with the cheese, and the cover should fit closely.

106. The band of the box cover should be at least one-fourth of an inch thick, to give additional strength to the package.

107. Insist on the teamsters using only clean wagon or sleigh boxes in which to draw cheese to the railway station.

108. See that the flues of the steam boiler are cleaned out every week.

109. Finish all of every day's work every day, in the very best way you can.

110. Keep everything in and about the factory scrupulously clean.

111. Keep a correct and detailed record of every day's make.

112. Occasionally compare the working of your factory in all its details with the foregoing recommendations.

A P P E N D I X.

Conference of the Dairymen of the State, Utica, N. Y.

In compliance with a call issued by the secretary of the New York State Dairymen's Association, a conference of gentlemen skilled in the art of butter and cheese-making was held in Bagg's hotel, Utica, Friday, June 1, 1888. The meeting was called to order at 11.30 A. M. by Secretary Shull, who read the call for the meeting, and said: The Legislature at its last session appropriated \$2,500 for the purpose of extending dairy knowledge and science, to be expended under the direction of the New York Dairymen's Association. In addition to the annual meetings, it is understood, and has been authorized by the board of managers of the association, that a number of dairy conferences be held for the purpose of illustrating butter and cheese-making. At these conferences the process of butter or cheese-making is to be shown at a dairy or factory, and the entire process of manufacture performed. In addition to the appropriation for the dairymen's association, an appropriation of \$5,000 has been made for the purpose of instructions in cheese-making by special instructors, under the direction of the State Dairy Commissioner. Mr. Brown, the commissioner, being present, will be able to state the detail of the work required by the act.

Mr. J. S. Shattuck of Norwich, president of the New York State Dairymen's Association, in the chair.

State Dairy Commissioner Josiah K. Brown, who was present by special invitation, then spoke briefly concerning the act for the appropriation referred to by Mr. Shull, of the work to be done by the instructors and the benefits to be derived therefrom.

Mr. J. B. Harris, of Antwerp, spoke on the duties of the instructor in cheese-making as follows: "The fact that this appropriation has been made and a meeting of this character has been called is evidence to me that cheesemen and the dairying interest of the State recognize the necessity of a reformation in our methods and practices in the art of manufacturing butter and cheese. The itinerant instructor who has the welfare of the industry at heart can not resist at times a feeling of discouragement at the practices, both on the part of patron and maker with which he has to contend. At times we are led to believe that the Legislature of the State ought to interpose and provide, as it

does in the case of druggists and the learned professions, that no man shall be permitted to make cheese until he has served an apprenticeship of sufficient length, under a competent master, or taken a course of instructions in a practical school. This having been done, it would seem that he ought in some way to be made personally responsible for the quality of his product, and that to protect him, the patron should be made to answer on every occasion for the quality of the material he furnishes. Good milk when properly made up will produce good cheese every time, and whenever we find poor cheese on the factory shelves we know with absolute certainty that either the maker or the patron is at fault. A system of dairy instructions must proceed upon one of two methods; it must be either voluntary or compulsory, and as the last of these for present purposes is doubtless out of the question, it follows that only the former is to be considered. I can think of only two methods, the school and itinerant. To conceive of a school for the practical instruction of cheese-makers, an institution equipped with all the best modern appliances and supplied with a competent corps of professors, and wherein the product of a large number of dairies would be transformed into the best quality of butter and cheese, does not require any great effort of the imagination; but to go further and to conceive of the New York cheese-makers flocking to that institution from all parts of the State is another and somewhat more difficult task for the wings of our fancy. The present practice throughout the State is by far too easy and comfortable to admit of the success of such institutions. At present, the boy, who having nothing else to do, casts his eyes upon cheese-making as a refuge from idleness, betakes himself to the factory, hires himself out for the season at ten or fifteen dollars per month, works the season through, and, when the last cheese is laid upon the shelves in the fall, finds himself a full-fledged maker, prepared to take charge of a factory and much wiser in his own conceit than he will be when he has worked at the business five to ten years. The business is overflowing with makers of this description, and it seems to me that the only way to reach such is to give them a call at the factory where they are employed. It seems to me that, to meet the wants of this association, there is no system like that of the itinerant. Choose from among the competent men of the State a few energetic, painstaking, persistent and enthusiastic instructors; compensate them fairly and send them forth to every factory of the State, and, depend upon it, such men will in time make themselves felt, and our butter and cheese will be found slowly, but surely, climbing in the markets of the world.

Mr. Robert McAdam, of Rome, said: The manufacture of cheese and butter in this State has, in a great measure, passed from the control of dairy farmers into the hands of men who own the factories, who employ cheese or butter-makers, or are themselves the manufacturers. Under this system the farmers are apt to become indifferent to the actual management, and seldom interest themselves more than to attend the factory meetings, and secure as cheap terms as possible to have their milk made up. Hence, many makers are engaged who, having little training or experience, are actually incompetent, and often never aspire to a high standard of quality in their products. This lack of care and skill is the foundation which sends forth the inferior goods. Yet these makers are not so much to blame, because they entered upon their trade without fully comprehending the responsibility they had undertaken. This subject, in its various aspects, has been for many years the object of my attentive consideration, viz.: How to elevate the general quality of dairy products up to the level of the best. In my mind this appears clearly practicable. But individual effort is not equal to the work. It requires the combined coöperation and persistent efforts of dairy farmers and factorymen, which have to be maintained year after year, so long as dairying remains the leading source of income to dairy farmers. Now, it is evident to me that we have within ourselves the requisite knowledge and skill necessary to produce the desired results. But, in considering the subject, it is of the greatest importance to avoid entering upon all uncertain or doubtful courses. Further, at the very outset, we are met with the question, "Are the means at the disposal of the Dairy Commissioner adequate to begin this improvement in dairy produce which is contemplated?" As a nucleus to initiate a preparatory movement to awaken dairy farmers and the factorymen from their apathy, it may be utilized to good advantage. But, as to be sufficient for employing an effective staff of instructors to pervade this State, the sum is utterly inadequate. Besides, at this season of the year, those who are competent to be instructors are almost all engaged for the season, and not available at present. Therefore, I believe it would be better and contribute more toward ultimate and permanent success to use the funds in a preparatory way, which would bring out tangible data as a sure and safe basis of procedure in the future for those intrusted to direct the movement.

F. W. Edmunds, of Sherman; Colonel F. D. Curtis, of Charlton; W. H. Gilbert, of Richland; W. W. Hall, of Gouverneur; F. Blanding, of Hubbardsville; H. C. Brockway, of Richfield Springs; William H. Lewis, of West Potsdam; E. S. Munson, of Franklin; Nathaniel Mann,
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of Ballston; Robert McAdam, of Rome, and J. B. Harris, of Antwerp, made remarks on the subject.

Dairy Commissioner Brown said he would like to have formulas for instruction in butter and cheese-making prepared by the conference.

On motion of Mr. Shull, the following persons were appointed to formulate instructions in butter and cheese-making:

Committee on Butter—Colonel F. D. Curtis, Charlton; W. H. Gilbert, Richland; Nathaniel Mann, Ballston; E. S. Munson, Franklin; H. O. Hale, Norwich; M. Dougall, Schenectady; Milton Hoag, Norwich.

Committee on Cheese—F. Blanding, Hubbardsville; F. W. Edmunds, Sherman; W. H. Lewis, West Potsdam; R. McAdam, Rome; George A. Smith, Frankfort; H. C. Brockway, Richfield Springs; J. B. Harris, Antwerp; Levi C. Smith, Cedarville.

Recess till 3:30 P. M.

The special committees submitted the following reports :

BUTTER.

It is important that the cows should be adapted to the purpose. The breed should contain the proper elements for making butter. As proper feed we recommend a mixture of bran, corn, oats, mill feed and peas, with a small amount of linseed and oil meal. This feed should be mixed in proper proportions. The cows should be fed and milked with regularity. The water should be pure, the stables well ventilated, the cows kept clean, and the most careful and painstaking care had in all places for cleanliness. The cows should be milked, if possible, always by the same person. As soon as the milk is drawn it should be set for the cream. The utensils should be scalded always after being used, and kept perfectly clean and sweet. The cream should be raised within twenty-four hours, after which it should be kept at a temperature of forty-five degrees until the time for the ripening process. To perfect the ripening, warm the cream up to a temperature of sixty-two degrees, and stir it frequently. Then churn at a temperature varying from sixty-two to sixty-eight degrees, according to the season and surrounding temperature. No cream should be added after the ripening process has begun. When the butter has come about the size of wheat grains, draw off the buttermilk and wash the butter in cold water. Agitate the butter a little, then draw off the water and repeat this process until the water runs clear. Take the butter out carefully and weigh it ; then place it on the worker and salt, one ounce to the pound ; work the salt in and pack the butter immediately.

In regard to the methods of instruction we recommend, in order to reach the dairyman in the most effective manner, that conferences of dairymen be held in sections of the State where butter is made, and both theoretical and practical instruction be given.

EXPORT CHEESE.

First, the milk is supposed to be of a normal standard. The temperature at which to add the rennet should be eighty to eighty-six degrees. Use sufficient rennet to coagulate in fifty to sixty minutes. The time to cut curd is when it will split clean and free from the finger when put into the curd. Agitate the milk slightly until signs of coagulation appear. Stir gently with the hands for about five minutes before heat is applied. Apply heat gently, using one hour to bring the heat to ninety-eight degrees in summer and to 100 degrees in the fall. Stir for ten minutes after the mass is heated to the desired point; then stir occasionally until the curds seem well cooked and are firm to the touch. Now remove the whey. If the maker desires to use a curd sink, let him now throw the curd into the sink and let it drain. Stir it well and keep from matting until ready to apply the salt. If the maker wishes to grind, allow it to pack in the vat or sink. After the degree of acidity desired is reached, the curd is to be cut up and ground. The salt can now be applied. In either case the curd must be kept warm. Do not let it get below ninety-five degrees. Put to press at about eighty degrees. Apply the pressure gently for the first hour. Keep the cheese in the press until after dinner the following day. Keep all cloths, followers and hoops clean and sweet. Scald them every day. This is necessary to make a clean, bright surface. Keep the cheese shelves clean. The temperature of the curing-room should be kept at about seventy degrees, and be kept well ventilated, yet no wind should be allowed to blow on the cheese. Know that your thermometers are correct.

HOME TRADE.

To make home-trade cheese, set at lower temperature; cook lightly; stir less and salt less. Make it a point to retain moisture in your cheese.

The reading of these reports of the committees was followed by a discussion of the plans submitted, after which they were adopted.

At 5.30 p. m. the meeting adjourned.

Dairy Conference at Malone, Franklin County, N. Y., June 14, 1888.

The first of a series of conferences, for the year 1888, under the auspices of the New York State Dairymen's Association, convened at Knapp's butter factory, four miles north of Malone village, Franklin county, at 11 o'clock A. M., June fourteenth.

The meeting was called to order by Mr. Alden King, president of the Franklin County Farmers' Club, who said :

Ladies and Gentlemen : I suppose you are all aware of the object of this meeting. I will simply state that we have some gentlemen here to give instructions in the art of butter-making, and to discuss questions pertaining to dairying.

I introduce to you the secretary of the State Dairymen's Association, who will state the objects of the meeting.

Secretary SHULL.—*Ladies and Gentlemen* : In pursuance of a resolution of the board of managers of the State Dairymen's Association, the secretary of the association was authorized to hold a series of conferences, in different parts of the State, where butter-making and cheese-making could be illustrated, and where various questions pertaining to the dairying interests could be discussed. In accordance with that authorization, I suggested to your Franklin County Farmers' Club a conference for your locality, which suggestion was accepted, and a conference for butter-making was invited.

The object of holding these conferences is to educate in the science of the dairy. The detail embraces the cows producing the milk; their food and treatment; methods of handling and treating milk from time of milking until delivered to the maker, and the various treatments until the product reaches the consumer.

This is a subject touching the prosperity of the farmer and of the public in general; for you are aware that the better your product the greater the consumption; and the larger the amount consumed the greater the demand. We will go through with the process of butter-making, and then if anyone has questions to ask they will be taken up and discussed.

Colonel F. D. CURTIS.—Ladies and Gentlemen : I am, in a small way, a practical dairyman. I will say a few words in order to dispel any feeling of bashfulness, as I know farmers are slow in coming forward in such matters. Neither my friend, Mr. Munson, nor myself, have come here for the purpose of making any display of wisdom. We know you have as successful dairymen here as there are in the State of New York, and I know that your butter and cheese is also of the highest quality. You know that if you take two dry sticks and rub them together you can produce fire. And so it is with our coming together. Possibly we may have found out something about making butter and handling milk and feeding cows that some of you may not have found out; and some of you may have discovered things in regard to this business that we are all interested in, that the rest of us do not know. So we come together as brothers, interested in the same business, to talk over matters and bring out points, and see if we can not instruct each other. We do not see each other often enough to get the advantage of each other's knowledge and successful methods, hence the value of these conferences. We want to take in all we can in the way of knowledge and instruction. I have my notions about butter-making, feeding and taking care of cows, and I know that the result of those ways is a very fine quality of butter, which sells in the market at a high price. I know that most of my methods are, and I want to have all of them, in accordance with scientific principles; the principles underlying this business. The handling of milk and the making of butter is really a very nice scientific process. There is a mechanical part, but it involves nice scientific principles. The surrounding circumstances, as you dairymen all know, are so varied in this business that no arbitrary rules that we can lay down, can be followed strictly to the letter. We have to vary these rules according to the condition of things. Even electricity has a great deal to do with butter. A short time ago we had five or six days of very cold weather and we had in our dairy-houses some twelve cans of cream, none of them fit to churn. They had not ripened sufficiently up to 12 o'clock of the day to which I refer, but that afternoon it came off very murky and hot, and we had a tremendous thunder shower, and the air was filled with electricity, and although these cans of cream were shut up close in the dairy-house, the next morning every one of them was sour and thick and ready to churn. It was churned at once, or the cream would have deteriorated and the butter would not have been of as good quality. Any arbitrary rule as to how long you should keep cream, would not in this case have been applicable.

We find in consulting scientific authorities, that electricity has a great deal to do in changing the character of milk and cream. There are certain chemical and scientific principles connected with the handling of milk and cream, and in the making of butter, that must be observed. They can not be violated without injury to your product. I think every dairyman knows that, by his own experience and observation. The acid that is developed in the cream eats up the animal fats and they are destroyed, and if you leave your cream long enough, the acid will eat up all of the animal fats and you will have nothing but water left.

Now, ladies and gentlemen, we wish to have you ask such questions as you deem proper. We want to know if we can improve in making butter. We want to thoroughly learn the business and become successful in it. We want to learn well the principles involved, and we should take for our instructors men who have been successful, and I know you have got them among you here.

There are two kinds of butter that are wanted in the market. The most popular butter; the kind that people are willing to pay the highest price for, is that which is fresh, aromatic, and of a fine delicate flavor. People who buy that kind of butter are not so particular in regard to its being thoroughly worked. The other kind is that which is made to keep in storage until winter, or until the market is cleared of this fresh-made butter. There is a grand opening in this State for fresh butter during the winter season as well as in the summer. People are willing to pay a high price for it. In order to get a good price for your butter you must have consumers. You must have people who want your butter because it suits their taste, and you must keep up your supply in the winter as well as in the summer.

If you wish to become a successful dairyman, and this applies also to those who patronize creameries, you want cows that are adapted to the business. I am no stickler for thoroughbred stock, for I appreciate the fact that a large proportion of the cows in this State are not thoroughbred; but you want cows adapted to the making of butter. You should make a test of your cows and find out that fact. It is true in a great many instances, and I have no doubt it is true in this country, that the farmers are milking cows that are not adapted to butter making. There are cows that are milked all their lives that make comparatively little butter. You don't want such cows. The composition of their milk is such that there is no developement of butter fats. Their milk might make good cheese, but will not make good butter. Milk should make four or five pounds of butter to the

hundred, and so on up to seven or eight pounds. There should be great care taken in the selection of cows that are specially adapted to the purpose for which you want them.

Then you should have food suited to those cows. The tendency of the average farmer is to feed his cows whatever he happens to have. If he has cornstalks, he feeds them cornstalks; if he has swale hay, they get swale hay; if he has oat straw, he feeds them that; if he happens to have plenty of corn, he feeds corn meal in addition. Now this is all wrong. The capabilities of the dairy in this State are not fully developed, and we can do a great deal more than we have done to bring this matter of the feeding of cows down to a fine business basis. Cows should not be kept through the summer on pasture alone. When I run a machine for profit, I want that machine to be run to the best possible advantage, and to its utmost capacity to secure its utmost production. Thus, in wintering cows, they should not be exposed to the cold, nor so treated that it takes half the summer to get them into a condition where they become profitable. My cows are fed some grass every night in the summer, when they are brought up, and then a feed of bran and cottonseed meal. Cows want some extra food, and food adapted to the making of butter fats in their milk. If you will give this matter of feeding careful attention you will find that you can increase the product of your dairy to an extent that will astonish you.

Another thing, cows should be always perfectly healthy. This matter of the health of the cow explains a great many of the mysteries that occur in the making of butter. Now, no dairyman should use milk from a cow that is in any way sickly, because the fever in the cow will produce living germs, and develop in the milk and cream and butter. So long as you keep this milk at a temperature of forty to forty-five degrees you can arrest the growth of the germs; but when you raise the temperature you set these germs into active life and operation, and when they get into the butter they develop and spoil the butter.

You must be exceedingly careful and not let dogs chase your cows, for they get worried and heated. Being worried and heated will produce germs in the milk, and in the end will spoil the butter.

You should use kindness in caring for your cows, for there are no animals on God's footstool that should demand from man more kindness, respect and affection. If you give your cows careful and gentle treatment you increase their value; if you are rough and brutal, you injure their productiveness.

Your cows should always have pure water. There are many mysteries in the making of butter that can be explained by reference to the supply of water furnished the cow. There are many kinds of germs in stagnant water, all of which are deleterious and tend to injure the quality of your butter. And so, if you are going to make fancy butter, and make a reputation, you must be exceedingly careful in regard to the drink of your cows.

Then there is cleanliness and an avoidance of odors which should be observed. Milk is peculiar in its absorbing qualities and in its tendency to take in odors. Tobacco smoke will give a taint to the milk, and so will kerosene oil. There must be no taint about the milk. It should not be left in the stable for any length of time. When two pails are filled they should be taken immediately to the dairy-house. By letting it stand, time is given for the milk to take in odors and the cream to rise, and there is more or less retained by the strainer.

The stable should also be kept clean. It is an absurd idea to have a dirty and filthy stable in which to milk cows and expect to make that milk into rich, aromatic, beautifully-flavored butter that is going to recommend itself to the consumer so that he will be willing to pay a high price for it.

Now, the setting of milk so as to get the most cream. That is an open question. There are so many different ways in which that is done that I shall not attempt to argue in favor of any particular way, but only say that you must do it in such a way that you can get all the cream up before the milk gets sour. You must set your milk to cream in a clean, sweet place. The system which you shall adopt in setting is another thing. We raise our cream in the Mosley & Stoddard creamer. We have two of them, and use ice. In this butter factory you set your milk in open pans, and it is an excellent way when you have a stream of pure, cold water flowing around your pans, which cools your milk and keeps it cool until the cream rises. By this method you can make as choice butter as in any other way. This leads me to say that it is true that you can make as good butter to-day by setting milk in the old-fashioned milk-pans as by any other process, but in order to do it you must have all the proper surroundings and conditions. You must have a place that is specially adapted to it; but the average farmer does not have the facilities to keep the milk cool and sweet until the cream rises. If you have pure air and water, and can keep your cream at a temperature of about fifty degrees, you can make choice butter in the old-fashioned way; but, as a rule, it is better not to attempt to make butter in that way. I can not do it at my place. I have taken the milk of nine cows and carried it to

the swill-house because we couldn't make good butter in dog-days; but by the use of creamers and ice we now make as good butter in dog-days as any other time of the year. We reduce the temperature of our milk down to about forty-five degrees and hold it there until the cream rises, which is about twenty-four hours. I think the most of the cream will rise in twelve hours, but we have to watch the temperature and keep it down in order to get it in that time.

In deep setting, milk ought to be skimmed before it sours, in order to get the best quality of butter. If the cream is taken off in a sweet state you are able to handle it as you want to.

When cream is thoroughly ripened and in a perfect condition for churning it has a sort of satiny or glossy look. This cream that was churned this morning had that look, and I think it had a proper degree of acidity. Where you take off the cream entirely sweet it should stand twenty hours or longer so it may be aerated and oxidized and thoroughly ripened, and when it begins to turn acid and has this satiny look, it is then in the most perfect condition to make the best and the most butter every time. After it is ripened, if you let it stand longer, it will become too acid, and you will not get butter of as good quality. And that is not all; in proportion as you let this acidity go on, you will lose in butter, because it will eat up the fats in the cream, and it will be absolutely impossible to make first-quality butter.

Another thing, it is the custom of farmers' wives to skim milk up to the time they want to churn, and I have seen them turn the cream right into the churn directly from the milk. This is one of the greatest mistakes that could possibly be made, because the cream must be all of the same degree of acidity and ripeness or it will not form into butter at the same time. Just in proportion as you vary the age and character and quality of the cream when you put it in the churn, just in that proportion you will lose in the amount of butter you will get from that cream. I had this matter impressed upon me the other day in a churning of my own. In the first place I put too much cream in the churn, by putting in a can which had not ripened, and I didn't get all of the butter out of it. I wanted to make a big churning in order to observe some principles in connection with it, and I don't believe I scarcely got any butter from the last can, because it was not of the same degree of ripeness and acidity of the rest of the cream. And another thing, I had my churn too full to get all of the butter out of the cream, even if it had been of like acidity.

Your milk vessels should be thoroughly cleansed and kept clean and sweet, and you can not do this unless you make free use of boiling-

hot water. This should be done in order to avoid all taints or putrefactive substances that might be given to the milk or cream that is put in them. The development of the germs of ferment and putrefaction are so minute and so mysterious that we do not give them that careful consideration we should.

A churning of butter was here placed in the butter-worker by Mr. Knapp, the maker at this factory. In answer to the question, Mr. Knapp said: I work my butter until it sweats good (exhibiting butter). I rub my tub with salt before packing the butter. Salt an ounce to the pound of butter. In packing butter I give a half pound for shrinkage.

Colonel CURTIS.—I wish to say, in this connection, that this gentleman has established a reputation for Franklin county by working the brine out thoroughly. Creamery men in the west would leave at least five per cent more moisture in their butter than is left in this. This butter has twenty per cent moisture in it, while western butter has from twenty-five to thirty per cent. Moisture is an advantage to the butter, and the consumer thinks so. It gives a more cheery look—the grain is more unbroken and it is more “spreadable.” Butter with a large amount of moisture sells for more money, and is better liked than the dry-worked. Farmers’ butter is worked to keep.

The average western creamery butter contains from twenty-five to thirty per cent of moisture. The tub and the atmosphere will absorb or dry out three per cent of the moisture from the butter, so that our average butter made in the State of New York and kept through the summer, does not have more than ten per cent of moisture in it when it goes to market. The butter that is going to be sold fresh, however, should have considerable more moisture in it than that which you are going to pack.

BYSTANDER.—How much salt do you use to the pound?

In answer to the question, Mr. Knapp said: We use Higgins’ salt, because it is the finest, and as pure as any; an ounce to the pound of butter.

Mr. E. S. MUNSON.—Mr. President: In relation to salt, I do not believe it makes any difference which kind you use if it is a pure salt; but there is this thing to be taken into account, if the man to whom you sell your butter has a prejudice on the salt question, then you must cater to him. It is undoubtedly true that buyers are more prejudiced than makers, and if the purchaser wants one kind of salt the butter-maker must use that kind, as he would not wish to lose his customer because of a little difference in the cost of salt. I have practiced salting butter in the churn. I have a man to take charge of one of my factories who had been in the butter business a long

time, and he salted his butter in the churn. I first dissented, but he urged me so hard that I finally told him to go ahead awhile, and watch it, and see what came of it. It is a great saving of labor, and no man wants to throw away labor.

Mr. SHULL.—Mr. Knapp, will you please tell us all about this churning of butter?

Mr. KNAPP.—We had 207 pounds of cream, and churned it at a temperature of fifty-four degrees. It took thirty-eight minutes to churn, and we have seventy pounds of butter. I salt one ounce to the pound, and work it till I think it is worked enough. I also can tell by breaking it and looking at the grain.

Mr. CURTIS.—I observe that Mr. Knapp makes a little cavity, or pocket, to see if any buttermilk accumulates in it, and if you will look at this butter you will see that he has not destroyed its grain. It breaks like breaking iron.

Mr. HYDE.—Will the milk of Jersey cows, when mixed with that of other breeds, yield its full value when churned?

Colonel CURTIS.—The cream from Jersey cows' milk will rise sooner than from any other milk, because the globules are larger and they come up quicker and freer. It will not be lost if kept sweet long enough for all the cream in it to rise. There will be no loss if all the cream is perfectly ripened and stirred or mingled together. There might, under certain conditions, be a little loss, but the proper way is to have the cream thoroughly mixed, so that the same degree of acidity shall permeate the whole, and it will be aerated and oxidized alike, and then it will churn alike.

Mr. HYDE.—If you had a herd of Jersey cows, would you have any hesitation in taking your milk to a creamery while the cows of the other patrons were of another breed?

Colonel CURTIS.—The only way to test that would be to test the amount of butter fats in the milk brought by each patron, and then each man will get what he takes. If I had a herd of Jerseys and took my milk to a creamery to put in with that of common cows, I should calculate I was being robbed every day. It would not be fair for one patron to feed his cows nothing but grass, while another fed bran, cottonseed meal, or other fat-producing food. There can be no adjudication of these interests except by a test of the solids which the milk of each patron contains. Milk may vary in its solids from one and one-half per cent to eight and one-half per cent. There are many cows that give milk that has only one and one-half per cent of butter-fat in it, and others whose milk will run four, five, six, seven and even eight per cent, but eight per cent is an extreme percentage.

Recess one hour.

THURSDAY AFTERNOON.

Conference was called to order at 2 P. M. by Chairman King.

Mr. SHULL.—If there are any further questions to be asked, Colonel Curtis will be pleased to answer them.

Colonel CURTIS.—It is very important to avoid irregularities and excessive changes in feeding or watering cows, and especially in salting. They should always have salt where they can get it when they want it. It is also necessary that cows that give milk should have a great deal of water, and just in proportion as you can make a cow drink water, up to a certain limit, just in that proportion you can increase the flow of milk. I do not mean that you can pour water down a cow and that she is going to give milk accordingly, but if you stimulate the cow to drink a large amount of water, the natural tendency is that she will give an increased flow of milk; and, vice versa, if a cow is deprived of water she will give a reduced quantity of milk. In hot weather a cow requires an extra amount of water to keep the system cool and prevent a feverish condition which so seriously affects the character of the milk.

A gentleman told me to-day that he had a cow that gave milk that tasted like soda, and wanted to know the reason. The reason was simply this — that cow was sick. She was not in perfect working order. Certain salts in her blood that should have been eliminated through the kidneys and other parts of her body were not thus eliminated, and went into the milk and gave it that peculiar taste. You farmers have observed that when a cow has been in milk a long time that there will be little particles of cheese or caseine in the milk. That caseine is actually secreted in and comes from the milk glands, and when a cow reaches that condition it is a sign that she should be dried off. There is no arbitrary rule about how long a cow should go dry. I have cows that have never been dry. I lost a cow two years ago that was about twelve years old and was never dry from the time she came in. As a rule, I should say a cow ought to go dry about two months. It does not pay me to keep my milking machines idle, and to have them go dry for three or four months is not a profitable partnership between me and my cows.

Cows should also be fed food that will improve their physical condition as well as produce milk; and if this is done the calf will be born strong and vigorous, and the cow will be in good physical condition.

In the matter of working the butter I would say that we stop the churn at a point when the butter is in a granulated form, about the size of a kernel of wheat; then the buttermilk is drawn and the butter

washed in cold water until the water comes from the butter clear. We weigh the butter and then sprinkle the salt over the butter and let it stand for a short time, or until the salt has dissolved and flowed down between the interstices or openings in the butter.

At this point comes in the two systems of making which I have already mentioned — the one that is sold fresh and the other to be packed and kept for future market. When sold fresh it should be pressed together without breaking the grain and made up in patties, which are folded up in cotton cloth and sent to market. In that way the aroma of the butter is retained, the grain is unbroken and it is in a form to suit the most fastidious tastes. But if the butter is made for future market, it has to be pressed more and packed with a less percentage of fluid.

We put our butter in ten-pound wooden tubs made air-tight when the cover is on. We made a test last year and the butter made the same as this was to-day, and packed, kept perfectly sweet seven months. Of course it loses some of its aroma. Now, salt does not preserve butter. Butter preserves itself, and the salt gives it a flavor. Salt has a tendency to arrest the fermentation or decay of the butter-milk, but not the butter. It is not necessary that you should work this salt through your butter or work the butter until you grind it to death to get the salt through it. If the buttermilk is out of the butter that is all you want, and you then distribute the salt through evenly so that one portion will not be more salty than another.

There are many things that affect the character of butter that skillful manipulation is necessary to have it perfect. In the first place, by not skimming the cream from the milk at the proper time. Another reason is, it is not properly ripened and mixed, and hence we do not get all the butter out of it. If allowed to stand too long there is a good deal of the butter eaten by the acidity of the cream. Another reason is the over-working of the butter, which grinds the grain out of it. Another reason; that the tubs for packing butter are often improperly prepared for the keeping and preservation of butter, and to exclude the air absolutely from it. It is very important that the tub should be thoroughly soaked and scalded with hot brine, and then there should be put at the bottom a cloth, and then a thin layer of salt, and then the butter should be pressed down firmly, so there can be no opportunity for the air to get in, and a cloth should be placed on top with some salt or brine on top, and the cover put on air-tight. Then set the tub in a place where the temperature is cool and dry and where it can not get musty or moldy or absorb taints. You can keep butter an almost indefinite length of time if treated in this

way. We should do our utmost to have our butter go to market in good condition.

Question.—What makes butter streaked?

Colonel CURTIS.—There are different reasons for it. One reason is not having the salt evenly incorporated through the butter. Another reason is churning cream not sufficiently ripened. Spots in butter are caused sometimes by particles of cream that become dry, which will not soften up in the process of churning, and by little lumps of casein. Sometimes by putting ice in a churn butter may be made streaked; where the ice lies against the butter it will sometimes draw out the yellow color and bleach it. Cold water will sometimes do the same thing, and you will have, as a consequence, streaked butter. All these things require the greatest care and skill to avoid.

Mr. WHITNEY.—What is the best package for putting up butter to keep?

Colonel CURTIS.—A well-made tub with a cover made to fit airtight, such as I have already described, ash or spruce. Tin packages are good until they become rusty. Parchment paper packages are good for temporary use, but would not do for packing butter to keep. I was going to speak of salting butter with brine. There is no doubt but you can wash buttermilk out of butter better with a weak brine than with water alone. There is a kind of affinity between the buttermilk and the brine that takes it out more thoroughly. The wife of Dairy Commissioner Brown puts a strong brine in the churn, after having washed out the buttermilk, and then agitates the churn and mixes it through the butter and salts it that way, and then puts it in the packages; and they sell their butter to the best families in New York. The difficulty about salting butter with brine is to stop the churn when your butter is all in small granules. If you can do that then you can salt with brine and get it thoroughly and evenly distributed through the butter; but if you churn until some is in granules and some is packed together, you can not salt it evenly.

Mr. KING.—How do you work the salt through your butter?

Colonel CURTIS.—If you have only a small amount you can do it with a ladle, or you can use a butter-worker. There are three or four kinds of good butter-workers. This one used by Mr. Knapp is an old-fashioned one, and in hands less skillful than Mr. Knapp's would not appear to work so well. I like a butter-worker where the roller is fluted and goes down into the butter and forms little pockets or channels for the buttermilk to run out, and does not squeeze it out.

Question.—What do you think of the separators?

Colonel CURTIS.—I do not want to say anything about separators, as I am not authority. It is a rapid way of getting the cream out of the milk. In some factories the cream is taken out of the milk and churned, and the butter packed and shipped the same day. That produces butter of a peculiar flavor—of a creamy, sweet flavor, which is very popular in some places—but it is butter that will keep but a short time. I will not advise you one way or another in regard to these machines; but that it is an expensive way to make butter I have no hesitation in saying.

Mr. SHULL.—You set your cream in deep setting; how does that affect your cream as to quality and quantity of butter?

Colonel CURTIS.—Our system is some different from this used here; but at the same time the same principles which are necessary in the making of good butter are practiced here as well as with us. The difference is principally in the raising of the cream. We raise our cream by deep setting—submerging in refrigerator creamers—and are thereby enabled to keep our cream perfectly sweet. We can raise our cream in twelve hours, if we choose, by reducing the temperature low enough. Now the reason cream rises is because of its specific gravity; that of cream being fifteen per cent less than that of water, and hence the cream comes to the top of the water. Heating milk to 125 or 130 degrees will hasten the rising of the cream, and reducing the temperature down to forty or fifty degrees will also hasten the rising of the cream. It is the rapid changing of the temperature of the milk, either higher or lower, that hastens the rising of the cream. When milk is heated to this high degree of temperature and put in a cold room of course there is a rapid fall in its temperature, which produces that condition of the milk which causes the cream to rise, and when you put ice around it you cause a still lower temperature and get the same result. Another important thing is accomplished by scalding the milk. You destroy or neutralize the germs of fermentation, and the milk will keep sweet on that account much longer, and that helps to insure the rising of all the cream from the milk.

Mr. CHILDS.—By heating the milk will you not injure it?

Colonel CURTIS.—No, sir; I do not think it does when the milk is perfectly fresh and sweet; but you must not heat the cream after it becomes acid. You can warm cream when it is sweet without injuring it, but if you heat it after it is ready to churn it will reduce the amount of butter and affect its quality. The reason is this: Because these butter globules have then so far advanced that they will be melted by the heat, and the butter will be injured as well as the quantity lessened.

Mr. BRETON.—In some of our factories they claim it is just as well to carry the milk to the factory once a day in cool weather. They turn it in the can at night, and in the morning add the morning milk and carry it to the factory, and claim just as good results as though it were carried twice a day.

Colonel CURTIS.—I am just enough of a farmer and practical man to say this: When I find out by practical experience that such and such a thing is so, that is the end of it. Naturally I should say you would not get as good results by doing so.

Mr. JORDAN.—Which mode of raising cream do you consider the best to secure keeping qualities in butter?

Colonel CURTIS.—Any mode which produces perfect cream; and the best keeping butter in the world is made just as the butter here is made—with the cream slightly acid and thoroughly ripened, and then well worked and salted an ounce to the pound.

At this stage of the proceedings another churning of butter was brought out on the butter-worker, churned, salted and worked by and under the direction of Mr. E. S. Munson, of Franklin, Delaware county.

Mr. MUNSON.—This butter has been salted in the churn. The superintendent says there is seventy-two pounds of it, and instead of salting an ounce to the pound, he has, under my direction, put in eighty ounces, and if any wish to examine it you can now do so before he touches it with the lever. We want to know whether butter can have salt as evenly incorporated through it in this way as to add the salt after it is placed in the worker. If it can be, why then we can save a great deal of labor thereby. Now, if I were running this creamery, I should put that butter in the tub just as it is and send it to market, without touching it with the butter-worker at all; but if I were packing butter to hold till fall I would not risk it. In our factory we have practiced this way of salting for four years. We have packed it this way and held it until winter, and had it come out as good butter as any made in any other way. The man who is running my factory prefers to have butter stand three or four hours before packing, but without working at all. I can not see why this butter needs any more working. We washed the buttermilk out of the butter, and then sprinkled on the salt and gave the churn about twenty-five revolutions, and you can determine for yourselves whether it is properly salted. Now there is really nothing more to do with this butter. The same process was gone through with as with the other, up to the time of salting, which was explained this forenoon. You can judge of this butter for yourselves. You can see that it is in this light, granulated form; that it is nice and of a good flavor.

There may be persons here who pack their butter for fall market ; if so, I would not recommend the adoption of this plan to the full extent, but you can experiment on it until you are fully satisfied. In making butter at a factory you have more chance to experiment in this way than in your individual dairies — and I have made this experiment simply to show you that butter can be salted in this way. Mr. Shull has kindly consented to stand between me and the patrons of this creamery and make good any loss that may come from this experiment; but in your individual experiments you should go slow.

Colonel CURTIS.— This butter is in a suitable condition for market, but the difficulty of Mr. Munson's plan is that the maker must be smart enough to stop his churn at just the right time; but this butter is ready to go into the market this minute.

Mr. MUNSON.— There is another point which I wish to state. A few weeks ago a number of gentlemen met at Utica as a committee to confer together, and laid down some general rules for making butter and cheese. This committee agreed upon a temperature of sixty-two to sixty-eight degrees for churning. Mr. Knapp has churned this at fifty-four degrees and yet his butter comes in nice granules. Why is it? For the reason that this cream, instead of being down to forty-five degrees, was, when tested to-day in the vats, standing at sixty-four degrees. Notwithstanding the cold water under these pans, yet his cream stands at that temperature. Now, it is true that cream raised at a very cold temperature must be churned warmer than cream raised at a higher temperature, and that explains the discrepancy. Mr. Knapp understands this matter. Now, in regard to raising cream the way it is done here — it is all right with this gentleman because he has means to churn twice a day, and I find, with few exceptions, that he churns the night milk, and the morning milk each by itself, and consequently he gets good results and perfect work. But suppose instead of churning twice a day, he had a large enough churn and facilities for churning only once a day, and he takes this cream that has been standing at sixty-four degrees and ripening, and in the process of oxidation, and mixes it with the cream twelve hours younger, which he would have to do if he only churned once a day; then he would have to submit to great loss, and to that is what I want to call the attention of those who are running individual dairies. Where you mix cream of different ages together, you suffer great loss in the quantity of butter produced. In individual dairies where cream is raised in the old-fashioned shallow pans, the ripening process is going on. The milk is skimmed at different times till a full churning is obtained. Now, gentlemen, you lose every time you do that ;

and where is the remedy? That is what you want to know. The remedy is to do just as has been done at this creamery. But if you keep the cream of these several skimmings at a temperature of forty-five degrees until you get a whole churning, and then mix it and warm it up and let it oxidize and ripen together you will get all the butter out of the cream, and the butter will be of fine flavor.

Now, this question of oxidation and the ripening process in cream we should understand, whether we understand exactly the scientific principle involved or not. If a butter-maker should pay no attention to this ripening process going on in the cream, nor to the fact that acid was an agent in ripening the cream, and that mixing cream before the acid develops so as to act upon the mass alike, the result would be a great loss. It is conceded that the ripening process has nothing to do with the acid. The acid is simply to tell you when the cream is sufficiently ripened for the churn; it is a kind of mile-stone on the way which says, "Now go on with your churning; it is all right."

Colonel CURTIS.—Acid does not ripen the cream. We may have a thunder shower come up this afternoon and make cream acid that has not ripened at all, but when this condition of acidity arrives then you must churn the cream or else you begin to lose in quality and quantity in your butter.

Mr. MUNSON.—I think you all understand that point, but I want to call your attention to it, and emphasize it. We are not here with the idea that we know more than anybody else, but with the idea that we are going to learn of you and you of us. Those men who do not mean to learn anything, and think they know everything, are not the men for whom the State has appropriated money for the purpose of educating dairymen; but it is for men who are willing to learn and thereby better their condition.

One of the objects is: "Milk should be strained immediately after drawn, and aerated to eliminate any objectionable odor." That is all right, but with a well-conducted stable it would not be so very important if it was not strained immediately. There is a great deal in having a good, clean stable. You need not have your attention called to this matter of cleanliness and neatness. For many years you have seldom picked up a dairy or agricultural paper, but which has admonished you that everything should be kept neat and clean; and no one can make a nice article of butter without he is neat in everything.

There is one thing further I wish to say. When you employ a man or woman in your dairy, you should get those who are willing to put their minds on their business and pay attention to it, and take pride

in it. You want to make it your business to win; and you want men and women to work for you who will make it their business; that are level-headed and observing. When you find such, hold on to them, for one such is worth three of the careless kind.

Mr. SHULL.—Do you find any difficulty in salting butter in the churn?

Mr. MUNSON.—I think this is more evenly salted than the butter was this morning, which was worked on the worker. The salt was sprinkled on the top of the butter, when in granular form, in the churn, and the churn revolved about twenty-five times. Perhaps three or four more revolutions of the churn would have corrected any error you may discover. This butter was washed until the water flowed from it clear, and was then salted.

Colonel CURTIS.—Does it make a difference what kind of water you use in washing your butter?

Mr. MUNSON.—Certainly it does. You do not want water strongly impregnated with lime, nor with vegetable matter. You want just such water as you have here; cold, soft water.

Mr. SHULL.—Ladies and Gentlemen: The time has arrived to close the business of this meeting. We are very much obliged to you for your kind attention. I stated our object and purpose in the beginning, and I hope we have accomplished something in that direction. I trust those who have gotten any new ideas to-day will experiment upon them, and some time give us the result of their experiments.

Mr. KING.—Gentlemen: I have only one word to say in regard to this meeting. You know it was brought about through the honorable secretary of the State Dairymen's Association and the Farmers' Club of Franklin county.

On motion of Mr. King a vote of thanks was given to the secretary of the State Dairymen's Association and the gentlemen accompanying him to the meeting.

Adjourned *sine die*.

Conference at Ithaca, June 20, 1888.

A conference was held at the dairy of Cornell university farm, Ithaca, N. Y., on the 20th day of June, 1888, at 11 o'clock A. M., to illustrate butter-making.

Professor I. P. Roberts, vice-president of the association, called the meeting to order, and said :

Ladies and Gentlemen: I desire to introduce to you the secretary of the New York State Dairymen's Association, Hon. Josiah Shull, who will make a few remarks in regard to the object of these summer meetings throughout the State. We are all of us aware how much poor butter and cheese go into the market, and how badly even good butter and cheese are handled after they get in the hands of the grocers, and how this depletes the sales in the country; and that not half as much is consumed as ought to be. In view of this, the New York State Dairymen's Association have concluded to hold a series of summer schools, in different parts of the State, illustrating the practical operation of butter-making, and affording opportunity for discussion of the various subjects connected with it. This is one of these schools. Mr. Shull will now explain to you more fully the object of these summer meetings.

MR. SHULL.—*Ladies and Gentlemen:* We have met here to-day in conference to illustrate butter-making by actual process of churning cream. You are aware that certain things and certain conditions are necessary to make desirable butter, and I will say that the better those things and conditions are understood and carried out in practice, the more desirable and more perfect will be the product. To accomplish these ends certain rules must be observed, and the better knowledge and understanding we have of them, the better we will meet the demand.

First. To make butter, the milk from healthy cows only should be used.

Second. Avoid excitement of the cows, produced by chasing with dogs or any other manner. Harsh treatment lessens the quantity and injures the quality of milk.

Third. Cows should have an abundance of suitable food and pure water, and salt kept where they can have access to it every day.

Fourth. Cows should be kept from all foul odors and not be allowed to eat or drink anything that will give taint to the milk.

Fifth. Milking should be done at regular hours, with clean hands, clean udders and clean stables, and the milk kept away from any contaminating odors.

Sixth. Milk should be strained immediately after being drawn, and aerated to eliminate any objectionable odors; this done, the milk will make more and better butter.

Seventh. Milk vessels should be thoroughly cleansed — scalded with boiling water and aired — to keep them perfectly sweet.

The object of holding these conferences is to educate in the science of the dairy; to learn the best methods of feeding and treating cows, of handling and treating milk and its various treatments until the product reaches consumption.

Professor ROBERTS.—I think it is due to you gentlemen to know something of what we are doing and what we propose to do here. As a rule, we sell all our milk and make but little butter except in vacation. Then the professors and students are largely away and we have an opportunity to make some butter. We let our cows run dry, so far as we can, during the hot weather in midsummer. We sell about \$3,000 worth of milk and butter a year from an average of about twenty cows. The dairy is composed largely of grade Holsteins and Jerseys.

Whenever we keep cows we have to have horses also, and this afternoon we will give an opportunity of seeing the dairy and the horses we have on the farm. I will say the stock here is bred, as most everything here is largely done, to educate young men. This breeding of Holstein and Jersey cows and their grades and Percheron horses is done so the students may see the results and become familiar with and interested in them. It is an object lesson for them.

I have sent as far as I have addresses, the first bulletin of our Agricultural Experiment Station. It describes by words and cuts our little dairy-house. Not that it is a wonderful house, but it embodies certain principles which may be adapted to the building of fruit-houses, and also dwelling-houses. The law compels us to publish these bulletins every three months, and send them to newspapers, and also to persons engaged in agriculture, so far as we are able.

Now, this meeting is expected to be a meeting of questions and answers, rather than of set speeches. We have one or two expert butter-makers here, who will answer questions. I am not an expert

butter-maker. I know a little about producing milk, feeding cows and breeding them, but as to the actual manufacture of butter I know but very little.

We have two days milk, which has been creamed in open pan, the old fashioned way, and the whole amount has been held back so it would not be too ripe, and mixed carefully. It will now be weighed so we will know the number of pounds of milk and the number of pounds of cream; and it will be divided equally for two churns. We have tried to fix the churns so they will both run nearly at the same speed. We have tried to make the condition as uniform as possible.

The process of churning was here conducted by Mr. Tailby, of the University dairy, with a No. 3, Carter O. K. barrel churn, and by Mr. Fillhart, representative of the Gifford Manufacturing Co., with a No. 1, Gifford improved revolving aerated churn. Both churns were driven by an engine, the Carter churn making eighty revolutions and the Gifford churn eighty-four revolutions per minute. The result was as follows: The cream of 368 pounds of milk was equally divided. There was thirty-seven pounds of cream for each churn, which was churned at a temperature of sixty degrees; time of churning fifteen minutes. The buttermilk was drawn from each churn and the butter washed and salted in the churn; that in the Carter being salted with brine, and that in the Gifford with dry salt as you have seen. The Carter churn gave ten and three-quarters pounds of salted butter, and the Gifford churn gave ten pounds of salted butter.

Samples of butter from each churning were here passed among the audience for criticism as to appearance and flavor.

Professor ROBERTS.—The meeting is now open for questions.

Mr. GILBERT.—I observed that this cream was churned at a temperature of sixty degrees and the time of churning was fifteen minutes. I prefer to churn about half an hour, or from thirty to forty minutes. I could not have churned my cream in a week at sixty. During the past week I have been churning at fifty-seven degrees, and the butter came in fine shape. You can not lay down any set rules for churning; a man must understand his own cream. I use the Cunningham worker which is simply a table with a roller. I wash my butter at about forty to fifty degrees temperature; I never have discovered any trouble in washing butter with ice water. I use the cold, submerged setting. Never warm your cream until you have a churning; keep your cream cold until you have enough for a churning.

Professor ROBERTS.—In regard to temperature for churning, I would say that at a recent dairy convention in New York city, the

Jersey men churned their cream at sixty-two and the Holstein men churned theirs at fifty-seven. Here was one set of men churning at sixty-two and another at fifty-seven, and it is to be supposed that these men knew what they were doing.

Mr. TAILBY.—In answer to questions, I would say that the vent at the bottom of the Carter churn was opened to let out the gas. The water was poured in the churn to cool it off and make the butter more solid. The butter was washed twice with cold water and salted in the churn with brine made from Higgins salt, the strength of the brine being saturation. The butter was left in the brine about fifteen minutes, enough being used to cover it. I think there is no danger of getting butter too salt for customers when salted in this way.

Professor ROBERTS.—We have tried salting both ways. In salting with brine we found we had about eleven to twelve per cent water in the butter and we had about half an ounce of salt to a pound of butter retained in the butter. Then we salted with dry salt and analyzed it, trying to leave the same amount of water in—about twelve per cent—and we found we had just a fraction over half an ounce of salt to a pound of butter. In other words, if you leave twelve per cent of water in your butter, that water is saturated brine and nothing more, and you have got half an ounce of salt to the pound in your butter. You can not get in any more unless you do one of two things—either leave in more water, or put in more salt that is not dissolved. Almost all the butter we get has salt in it that is still undissolved. If there is no dissolved salt in butter, there is twelve per cent of water, and you can not by analysis get more than half an ounce of salt to a pound of butter. Some people like more salt than others; but once get used to this butter and you can hardly eat butter that has undissolved salt in it.

Mr. SMITH (of the Ithaca creamery).—One to twenty is the way that we salt our butter.

Mr. FILLHART.—In answer to questions, I will state that the Gifford churn is ventilated so that the air is carried in the churn all the time; there is a free circulation of air through the churn. I salted and worked the butter in the churn. Butter will not take more salt than it needs, the surplus will work out. I usually take the butter out and pack it in a tub in from ten to fifteen minutes. In salting and working in this way, I do not destroy the grain of butter.

Mr. GILBERT.—The question has been asked if butter will keep as well made in this granulated form as in the old fashioned way. I think it will. In the granulated form, when salted with brine, it is

more difficult to pack, and more difficult to keep when salted with dry salt. Last season I packed two tubs on the same day, I think the twelfth of July, one salted with brine and the other in the usual way. In the middle of December that salted with the brine process was worthless, while the other was apparently as good as when packed.

Mr. MCGILLIVRAY (of the Geneva experiment station).—I desire to ask a question here regarding cream. I have been obliged to skim very closely to get the weight of cream, as we have to keep a strict account of the number of pounds of milk and pounds of cream. I found when I churned, although I did not allow my cream to get very sour, that it was too thick and I found that by adding water at the same temperature of the cream it churned well; but that by adding sweet milk to the cream and having it ripen together, it worked a great deal better. I would like to ask if there are any objections to that, to putting milk in with the cream and allowing it to cure with the cream.

Mr. GILBERT.—Sometimes it will remain in the butter. I think the purer you get the cream the better, and there should be no sour milk with it. I should prefer water to thin it.

Recess until 2 o'clock P. M.

AFTERNOON SESSION.

Professor Roberts called the meeting to order at 2 P. M., and said:

Ladies and Gentlemen: I have the pleasure of introducing to you Mr. Gilbert, a gentleman who has been very successful in making butter up in the northern part of the State, and he will outline the methods he pursues in making butter, and that will make a sort of text for you to ask questions from.

Mr. GILBERT.—Mr. President, Ladies and Gentlemen: Butter-making I consider manufacturing, just the same as any manufacture, and the man who is successful in making butter must have proper tools. He can select his dairy for the purpose he wants it. If he is making butter, he wants butter cows. In fitting out a dairy and selecting cows, the dairyman should test every cow. I do not think there is a dairyman in the State of New York who, unless he is governed by the churn test, is not milking and making butter from cows that are running him in debt. A few of his cows are making money for him and the rest are not. After you get your cows then comes the question of feed and care. They should have good liberal feed, of a nature to produce butter, and plenty of fresh water. They should be kept well housed and fed in winter, and cared for as

well in summer as in winter. I think dairymen lose money by letting their cows run down in July and August. A well-fed and well-cared for dairy will produce as much butter in July and August as in June, while the cows may not give as much milk.

Then, in regard to handling your milk. Whatever way you do and whatever system you adopt, whether it is the cold submerged setting or the open pan setting, it should be uniform and just alike every day. In that way you will make uniform butter; and even if it is not as good as that of others, you may have some customers that will like it because it is uniform and just the same every time. I use the Cooley cold submerged setting. I may state from my last winter's experience and tests that I think I have lost at least 4,000 pounds of butter in the last six or seven years, by reason of not giving cream proper attention. I found last winter that where I warmed up the night skimming and the morning skimming and added the evening skimming for the next day's churning, I was getting five pounds of butter from 100 pounds of milk, and thought I was doing well, although I did not like the looks of the buttermilk. I then commenced a series of tests. I kept my cream all cold until I got ready for churning. I found by the first test that where I took the night skimming and kept it cold and added the morning skimming, keeping it cold, the very first test brought me up to six pounds of butter to 100 pounds of milk. I did that for two days, and then went back and put night's and morning's together so it cured during the day and added the evening's skimming to it, and I found that I went back to five pounds again, with the same identical feed. Then I went back again and found I got six pounds and a fraction over. Then I commenced feeding differently, and whenever I changed my feed I tried to ascertain what I was doing and what the effect of the feed was. Their feed was corn ensilage and shorts, and I found by the addition of cottonseed meal to my rations of shorts and mill-feed, that I brought up the dairy, on an average, to seven pounds of butter to 100 of milk, and with the addition of a little corn meal I did bring it up, one week, to seven and a half pounds. During this time I changed the method of handling the cream, and I found, without exception, during cold weather, that when I added a skimming of cream to cream partially ripened, I lost every time.

You can lay down no specific rules for dairying. There can be some general rules but no specific ones. You will find that different kinds of cream and milk need different handling. With the open setting I can not churn at as high a temperature; it has to be churned five or six degrees lower than with the cold-setting process. This churning

has come to-day at a temperature of sixty degrees. At my dairy I am churning now at sixty-six and sixty-seven degrees. I churn my butter and handle it about the way Mr. Fillhart has done, in granular form. I salt it as customers require it. I have customers that want half an ounce of salt to the pound, some one ounce and some an ounce and a quarter to the pound, but usually it is an ounce. I mix the salt in with the ladle and let it stand five or ten minutes, to dissolve the salt, and then work with the butter-worker. I work it usually until dry, but not enough to injure the grain.

To questions asked, Mr. Gilbert answered as follows: Cottonseed meal, if fed judiciously, certainly does not injure the quality of the butter. I will say this, that I owe Professor Roberts something. He has been talking cottonseed meal for the last two years in our conventions, but I have been afraid of it. But this last winter I fed a couple of tons with the result I have just stated. I could not see any difference in the quality of the butter. I am milking about seventy-five cows now; some of them old, some of them young. All cows should not be fed alike; some cows want more and some less.

In stirring my cream I stir from the bottom to the top and I stir it in this way many times a day. All the cream in the pail must be stirred from top to bottom.

At forty-five degrees it will take six or eight hours for all the cream to raise on milk. I can get a greater measure of cream in six hours than in twenty, but I prefer to have my cream stand on the milk twenty hours.

I have never tried the experiment of setting the milk of different breeds of cows separately or of mixing them, and I can not tell what the difference in result would be as to time of churning.

Mr. LESTER (of Troy, Pa., creamery).—I have tried the experiment of churning the mixed cream of Holsteins, Shorthorns, Jerseys and native stock, and I have churned it separately and also by twos, and I found in my experience that the length of time of churning did not vary in either case.

The process of churning was here conducted by Mr. Gilbert with the Carter churn. The cream from 103 pounds of milk from the University dairy had been set in a Ferguson creamer for twenty hours and was placed in the churn at a temperature of sixty degrees and gave six and three-fourths pounds of butter, or one pound of butter from fifteen and one-fourth pounds of milk. Time of churning, sixteen minutes. The butter was washed in its granular form, with ice water till water came off clear, then weighed and put on the worker and salt stirred in.

Mr. GILBERT.—I take my butter from the churn in the granulated form and put it on the butter worker, and salt it as my customers want it, usually one ounce to the pound. I stir the salt in before I work it. I don't think it makes any difference how it is stirred. While on the butter worker it is draining all the time, and I work it until it is middling dry. I print all my butter, or the most of it, and I print from the butter worker. I use the Rapp press for the pound, and the Excelsior press for the half-pound prints.

Professor ROBERTS.—How shall we set milk to get the most cream? I imagine that half our farmers lose at least ten per cent of their cream because they do not understand the principles of setting milk right.

Mr. GILBERT.—I should set milk as soon as possible after it comes from the cow, and in cold setting. The better and quicker you cool your milk the more butter you will get. As soon as I get my milk I put it in water and cover it with ice. If you want to get all the cream you should use ice.

In ordinary farming, where but few cows are kept and no special conveniences are provided for bringing down the temperature the first thing we know the milk is sour before the cream rises. The first thing after milking is to get the milk to the place where you are going to set it and cool it as fast as you can, whether it is with spring water or ice.

You will get more cream from milk set in spring water than from setting in the old-fashioned way.

Mr. LESTER.—In case you have the Ferguson creamer, how would you cool it?

Mr. GILBERT.—I put ice on top of the milk.

Mr. LESTER.—Do you think the animal heat would affect the raising of the cream?

Mr. GILBERT.—I think not necessarily; if it is ventilated. With any creamer, the quicker you get it in water the better for the milk. By the Cooley process I believe I get all the cream that can be got from the milk. When I get seven pounds of butter from 100 pounds of milk, I think I have got about all of it.

This butter I have just churned and worked, is fit for packing. I pack it or print it immediately from the butter-worker. In fitting butter for packing I think it should be worked as quickly as possible, and not break the grain; then pack it snugly and keep the air from it. When the grain of butter is all right if you break it, it will look like broken iron; if you work it too much it will not show any grain.

Mr. DANIELS.—With reference to the temperature of setting milk, how far is it necessary to drop the temperature of the milk as it comes from the cow to the temperature of setting; is it necessary to drop to forty, fifty or sixty degrees?

Mr. GILBERT.—I am not afraid to leave my milk in the stable until they get through milking. We put our milk in a large carrying can, and when through milking it is drawn to the creamer and the milk submerged and ice put on. If you do not get it down to forty degrees you will not get all the cream.

Mr. DANIELS.—Suppose your milk is at a temperature of 100 degrees would you get all the cream if you put it down to sixty?

Mr. GILBERT.—I do not think you would. I have obtained the best results by icing twice a day. If the milk falls to less than forty degrees, you will notice an incomplete separation, but at forty degrees there will be a clean separation of the cream from the milk.

Mr. SHULL.—Is there anything in your stable that produces any foul odors?

Mr. GILBERT.—My stable is kept clean and free from odors. As long as the milk is as warm as the surrounding air it will take in no odors.

Professor ROBERTS.—We have a sample of butter here, produced by Mr. A. D. Baker, of Cayuga county, who has learned how to make money out of cows, and we would like to have the butter tested by anyone in the audience who cares to do so.

Mr. Baker's butter was here tested by Mr. Gilbert and others and pronounced to be of fine quality.

Mr. BAKER.—We milk six cows and use the Cooley creamer. Our average last week was over ten pounds of butter a day from the six cows. We usually let our cows run dry from four to six weeks. Our winter feed is wholly upon cut clover hay and stalks and a little grain up to the time the pasture gets good. We have found by experience that there is such a thing as feeding a cow too much. We had a cow we had kept for seven or eight years. I think she was three-quarters Jersey, and we never could make a success of her; she carried too much on her back. We finally decided that there was something wrong, and after experimenting for a little while we found that we had previously been feeding too strong.

Mr. GILBERT.—I find that no two cows want the same feed. If you feed a cow too strong, or not enough, it pays no dividend.

Mr. BAKER.—Do you consider the percentage of cream a fair test of the capacity of a cow for butter?

Mr. GILBERT.—There is only one true test, that is the churn-test. But you can get at it near enough by the cream-test by setting of milk; it must be solid and yellow.

Mr. BAKER.—Is it not a fact that a cow rich in milk, but not giving so much, will test a higher percentage of cream?

Mr. GILBERT.—Yes, sir; generally.

Mr. BAKER.—How heavy a percentage of cream did you ever see from a cow?

Mr. GILBERT.—I saw sixty per cent, and I rode ten miles to see the cow. It was a cow owned by a gentleman named Thompson, near Oswego. He placed the milk in a test tube and set it in ice water. This was a year ago last spring, and the cow had come in milk the fall before.

Last year I milked sixty-five cows—fifteen or twenty of them young heifers—and I averaged a fraction over 200 pounds of butter apiece from them for the year. I am now getting about three-quarters of a pound of butter a piece per day, on an average, from seventy-five cows. My cows are well fed. If you are going to run an engine you have got to give it fuel, and a cow is simply a butter machine.

Professor ROBERTS.—Mr. Gilbert has told us a great many things about the manufacture of butter, and he has given these things to us in a way that we can not ignore them. Now, I believe he knows how to sell butter. Of all things our farmers have to contend with is the selling of butter. Sometimes their butter is first-class; they carry it to the grocery to sell it for any price the groceryman has a mind to pay; then the groceryman stacks it away like codfish, kerosene oil and various other things, and finally retails it to some man in the city, and the city man makes the air blue about farmers. I would like to have Mr. Gilbert tell us how to sell butter to the consumer from the dairy-house.

Mr. GILBERT.—As I have said before, in order to get a good, first-class customer, you have got to get your butter just alike every day. Get him accustomed to your butter, and if it is just alike every time you will keep him, even if it is not as good as your neighbor's. Always sell your butter at its best. You can't keep butter in flavor a long time. My butter goes to the city of New York in the winter. This summer I am sending about 250 pounds a week to the Thousand Islands at thirty cents per pound. My carrying cases are made with an apartment in the center for carrying ice. I consider that the ripening of cream is an important part of making butter. I think the farmers of the State lose about ten per cent of their cream, which

goes into the buttermilk, because they do not understand how to ripen their cream. The cream should be kept cold and at a uniform temperature until there is enough for churning. It should be stirred often and thoroughly during the process of ripening, that it will ripen alike.

Mr. LESTER.—I use an apparatus for stirring which works very successfully. It is constructed on the principle of an inverted funnel, or an ordinary lamp-shade, which it resembles somewhat in form, and a number eight wire bent in the center and soldered in each side of the opening. By raising and lowering this implement in the cream pail I am enabled to stir the cream thoroughly and uniformly from the bottom. I stir my cream very frequently while it is ripening, and I am always able to churn in from ten to fifteen minutes.

Mr. DANIELS.—Can a cow, by any special feeding, be made to increase her quantity of butter?

Professor ROBERTS.—There is something in breed, and giving the right feed, it is possible. But it is foolishness to feed a cow that hasn't the capacity to commence with.

Mr. LESTER.—At the Vermont Dairy Association, in January last, the statement was made by a member present that it was possible to double the amount *per capita*, per day, by feeding two pounds of cottonseed meal and seven pounds of equal parts of wheat bran, rye and corn in the cob ground, making nine pounds in all, fed with twelve pounds of mixed clover and timothy hay, at morning and night.

A recess of twenty minutes was here taken to look at the cows and pastures of the University farm.

Mr. SHULL.—Professor Roberts, are the cows fed the grass we have just seen in addition to the pasture feed?

Professor ROBERTS.—Our cows are fed a little bran in order to get them in the stable, the mixture being about ten bushels of bran, two of corn meal and one of cottonseed meal, of which they are fed from two to three quarts a day; and the cows have some grass carried to them in the evening. A cow is a machine; she can't afford to graze grass sixteen hours a day in order to live; her time is worth something. I want the cows so fed that by eating an hour or two they can retire and make milk.

Mr. CHAPMAN.—Supposing your dairy had all come in in the month of April, would they have given a pound of butter to fifteen and three-fourths pounds of milk?

Professor ROBERTS.—No, sir, they would not. About one-third of them are fresh and about two-thirds of them will be due in two or three months. They give a larger percentage of butter than if they were giving a large flow of milk.

I think there is more money in winter dairying, provided you have proper quarters and food for making milk. You can not make it profitable in a barn where the temperature runs down to eight or ten degrees below zero. If you are going to try to winter through in the old-fashioned way and feed cheap feed, I beg of you not to try it. But with proper quarters and the right feed there is at least twenty to twenty-five per cent more profit in making butter in winter than in summer, because fresh butter is of ready sale, and it brings a better price. What would we think of a banker who would close his doors six months in a year and then open them some fine spring morning and invite his customers in? In dairying, the work should be divided so as continue during the whole year.

In that part of the barn where the horses are kept in winter we have about twenty stoves, wrapped up in so many horse-hides, so that we always have comfortable quarters.

I see President Adams in the audience, and I will invite him to come upon the platform and give us a few words of encouragement.

PRESIDENT ADAMS.—Ladies and Gentlemen: I have been with the board of trustees all day until about 2 o'clock, when I came from the university buildings, and have just now come up here, although pressed for time, to see how you are getting along and to give you a word of greeting from the university. I have no doubt you have already received the cordial welcome of the institution from Professor Roberts. I have no doubt he has stated to you what we have been and still are trying to do for improvement in agricultural science and those branches of learning allied with it, and anything that I may say upon that subject now may appear superfluous. But I will say to you that we are always glad to see the dairymen of the State whenever they find it convenient to come to this university. We are glad to see you and are glad to have you look into our ways of doing things. I believe that during the last year we have made some advances and adopted some new improvements in the department of agriculture, and to-day we have adopted some new legislation in regard to it. No doubt it will be as new and as much of a surprise to Professor Roberts as to you when I say that to-day, by vote of our board of trustees, there have been coupled the departments of agriculture, agricultural chemistry, physiology, entomology, botany and horticulture into what shall be known as the college of agriculture. Added to that was a resolution passed appointing Professor Roberts as dean of the new college.

I am glad to welcome you and tell you that the trustees are very glad of the signs of prosperity connected with this department in one

way and another. They are trying to strengthen it in every way they can, and in no way can this be done better than by having the farmers of the country come here and see what is being done. We have no skeletons in our closets; we have nothing here that will not bear investigation. We desire you to investigate everything we have, and if you do so I believe you are likely to go away with the feeling that there is quite as much here as you supposed. We believe that the opportunities here given are such as may be availed of by young men with profit to themselves, and that with the teaching of Professors Roberts, Law, Caldwell, Wilder, Comstock and Prentiss, and Professor Bailey, who is to be with us next year, it is impossible that your sons, and the sons of men like you, can come here without acquiring knowledge which shall be carried away with great profit to themselves and to the world.

Mr. DANIELS.—With butter at twenty cents a pound, will it pay to grain cows liberally?

Professor ROBERTS.—I think as a rule it will. I think there is money in butter at twenty cents a pound, but you must have the right sort of a cow. I believe there are not over twenty dairies in Tompkins county that have been sorted so carefully but that one-fourth to one-third of the cows are running them in debt. If twelve cows will give you more real money at the end of the year than sixteen, what do you want of the other four cows?

I think the first lessons for us to learn as dairymen, leaving all other things out, are:

First. That we must have a good cow. She need not necessarily be a thoroughbred; "pretty is that pretty does."

Second. Having a good cow, she must be fed well. You can't get something from nothing. She must not only be fed liberally but fed, if you please, *scientifically*. Milk is composed largely of water, and a farmer can not manufacture butter out of dry timothy hay.

Third. We should make our butter when people want it. For the next two months people don't want butter; it is hot and almost impossible to keep it, and they will eat almost everything else in preference to bread and butter. Now, what shall we do? Why, make butter when they want it; make it so good that they will eat a good deal of it; and try to sell it at the highest market price you can get.

Mr. SHULL.—Professor Roberts, how long should a cow go dry?

Professor ROBERTS.—From a month to six weeks, I think, is beneficial. Before calving I should fit her for it by feeding properly. All animals, when they are about to bear young, need succulent food.

While bran is not a succulent food, I should feed a little of it and cottonseed meal, to keep the bowels open.

Mr. BAKER.—With cottonseed meal do you consider that there is any danger of abortion?

Professor ROBERTS.—No, sir; that is all bosh.

Mr. DANIELS.—Where can you get cottonseed meal?

Professor ROBERTS.—You can get it of J. E. Soper & Co., New York city. A few of you gentlemen, when you get ready to buy, can club together and buy a car-load, and get a commission on it. It costs less than linseed, and you can feed it more abundantly. You can feed twice as much without injury, and without moving the bowels, as you can of linseed.

Mr. CHAPMAN.—Will malt sprouts injure the quality of the butter?

Mr. GILBERT.—Yes, sir; it will. Last winter I bought a car-load and commenced to feed it. The first thing I knew, I found the skimmed milk had a bad odor, and the butter that came to my table was worthless, and I quit it.

Mr. BURNHAM.—I have fed them for five years. I do not feed them to excess, and I have got good butter.

Mr. GILBERT.—I was feeding it in place of shorts; I fed corn meal and malt sprouts in place of shorts.

A gentleman inquired if there was any money made by feeding grain with butter at twenty cents a pound. I would say, get a cow that will give 300 pounds and you can make money. I made money last year with a cow that didn't cost me over eight cents a day. My ensilage amounted to one and one-half cents a day, and the grain between seven and eight cents. I fed between five and six pounds of grain a day.

Mr. BURNHAM.—What effect did the malt sprouts have on your butter?

Mr. GILBERT.—They made it soft, so it would hardly keep to get to New York, and it had a disagreeable, bad taste. I had a complaint from one of my customers that the butter, which had been two days on the road, when it got there tasted as if it had been in a cattle car, or fish car, and it was not fit to eat.

Professor ROBERTS.—This seems to be the trouble; the malt sprouts, which are simply the roots of barley, are rich in nitrogen, but they are in an imperfect state. The nitrogenous compounds are not developed—they have not proceeded far enough to be at their best.

With regard to cotton and meal, it is a product not only ground but cooked, and it is very easily digested.

Mr. DANIELS.—Will the milk of a number of cows when mixed produce more or less butter, than if churned separately?

Mr. GILBERT.—In my opinion, if the cream was proportionately mixed there would be no loss.

Mr. DANIELS.—Will butter come from the milk of a farrow cow as well as that of a new milk cow?

Professor ROBERTS.—It depends entirely on the feed. If the feed is oily and the globules large, it will churn with the other; but with dry feed, the chances are you will get very little from it.

Mr. BAKER.—While the Agricultural Experiment Stations are of great value, would it not be of value to have some of the farmers to coöperate with them in making experiments; would it not be of value to you as well as to them?

Professor ROBERTS.—I hardly think it would be worth while to have branch stations just at present.

Now, ladies and gentlemen, as the time has come for closing this meeting, I desire to thank you for your attendance and kind attention to-day. I assure you that although I am very busy and have to-day had additional duties and honors conferred upon me unexpected and unasked for, yet all I can do for the elevation of agriculture I am willing to do. It is a work I love; I certainly am heart and soul in it, and all that I am physically and mentally able to do is yours. I would say that we live in an age when it requires more to *live* than it ever did before. We live in an age of electricity and steam, telegraphs and telephones, and all these powers we have chained to the car of industry. And certainly, after we have discovered these forces of nature, and compelled them to do our labor for us, we should have more of the comforts of life, and we should get those comforts with less bodily exertion. But we must not forget that whenever we get anything for less bodily exertion we must give more brain force, and what we want to-day is *knowledge*. We want it scattered broadcast over the land so free, so plain and so common sense that the humblest toiler in the land may, if he will, have the opportunity to do better, and have more of not only the comforts but the luxuries of life. We can not have these things without training—without knowledge. I want to say to you that it is truer to-day than ever before that knowledge is power—that mind governs matter—and leave that thought with you.

I now declare this meeting adjourned, *sine die*.

Conference at Franklin, June 27, 1888.

The third conference of the series was held in the village of Franklin, Delaware county, N. Y., on the 27th day of June, 1888.

The meeting was called to order by Mr. E. S. Munson, of Delaware county, who moved that Hon. Ira E. Sherman, of Sidney, act as president of the day. Motion carried.

Chairman SHERMAN.—Ladies and Gentlemen: I hardly known what to say to you, my friends, this morning. I heartily congratulate you upon having such a pleasant day for this gathering. It seems as if we all ought to enjoy this grand opportunity given to us by the State Dairymen's Association, and I have no doubt we will all be profited by the occasion.

I have the pleasure of introducing to you the secretary of the State Dairymen's Association, Mr. Shull, of Ilion, who will now make known to you the objects of the meeting.

Mr. SHULL.—Mr. Chairman, Ladies and Gentlemen: We have met here in conference, to-day, to talk about, and to illustrate butter-making by the actual process of churning cream. You are all aware that certain things must be done, and certain conditions are necessary in the making of desirable butter, and you will agree with me that the better these things and conditions are observed and understood and carried out in practice, the more desirable, and the more profitable, will be the product. To accomplish these ends, certain rules must be observed, and the better knowledge we have of them, the better we will meet the demand.

In the first place, to make good butter, the milk from healthy cows, only, should be used. The excitement of the cows should be avoided, as harsh treatment and excitement lessen the quantity and injures the quality of the milk.

Cows should have an abundance of suitable food and pure water, and salt kept where they can obtain it readily. Cows should be kept free of foul odors and not be allowed to eat or drink anything that gives taint to the milk. Milking should be done at regular hours with clean hands and with clean udders and clean stables, and the milk kept away from any contaminating odors. The milk should be

strained and aerated immediately after being drawn. This done, any objectionable odors will be eliminated, and the milk will make more and better butter.

Milking vessels, after being used, should be thoroughly cleansed and aired to keep them perfectly sweet.

In the detail of butter-making these questions will naturally enter into our inquiry as we advance; and it is desirable that all questions and answers be confined to the several divisions of the subject, under discussion, as we proceed in our illustration and description. As soon as the butter shall be churned, the washing, salting and working will be done, and any person will have the liberty to ask any question, and answers from any person will be in order. I hope you will consider this meeting your meeting, and that you will get all the benefits you can derive from it.

Mr. Abell will now proceed to churn the cream. The amount of milk from which the cream was taken was 450 pounds, and the temperature of the cream when he commenced churning was sixty degrees.

Question.—I discovered that Mr. Abell tried the temperature of the cream after he put it in the churn. Is it not the best way to warm it in the can before putting it in the churn?

Mr. ABELL.—You can gauge it that way when you are at home; but I have not the facilities for doing it here.

Chairman SHERMAN.—It is not long ago since many of our farmers thought the old-fashioned dash-churn was the best. Now, but few farmers use the dash-churn. The old dash-churn has got to go.

Colonel MILLER.—I would inquire if it is certain that the butter will be better than it would have been if the cream had been sixty-two instead of sixty degrees.

Mr. ABELL.—No, sir; I think not; I think the cream at sixty-two would have been just as good.

The CHAIRMAN.—A gentleman wants me to ask how many of those present use the old-fashioned dash-churn to-day. Is there a single farmer that has used the dash-churn that can stop the process when the butter is in a granulated state?

Mr. ———.—I never saw it done and I have used one twenty-eight years.

Mr. BOSWORTH.—I would inquire if there is any system or rule in regard to the motion of the churn. At what speed should the motion be kept?

Mr. ABELL.—We do not want it to go fast enough to carry the cream over, but we want it just fast enough so the cream will drop back at every revolution.

Mr. BOURNE.—I would have the butter come in twenty or thirty minutes. You can tell by the concussion whether the churn is turning too fast or too slow.

With proper care good butter can be made with the dash-churn; but with a Stoddard churn you can tell by the sound when to stop churning; and then you can wash the butter in the churn and draw off the buttermilk by pulling out a cork at the bottom; and you can wash the butter completely and thoroughly without touching a ladle to it, or muxing it in any way; and by letting it drain there is no brine to be gotten out.

Mr. BOSWORTH.—I prefer the old-fashioned dash-churn because my wife says it is the best.

Mr. GILBERT, of Richland.—If your wife will divide her cream and churn half with a box churn and half in the old-fashioned dash-churn, she will find that she will get more butter with less labor from the box churn. I prefer a box churn to a barrel churn; you can get a better concussion with the revolving box churn than with the barrel churn.

Mr. SHERMAN.—I think the difference between the modern churn and the old-fashioned dash-churn is largely a difference of labor and in handling the butter.

Mr. WM. WHEAT.—I find the revolving churn more convenient than the old up and down churn. You do not have to stop and wash the butter down with this churn; and there is no waste with this churn, and no flies getting into it.

Mr. GILBERT.—And you get more butter, and consequently more money, out of your cream.

Mr. FARRINGTON.—If you get all the butter out of the cream with the dash-churn, how can you get any more with any other churn?

Mr. GILBERT.—You divide your churning and churn half with one churn and half with the other, and you will see the work is easier.

Mr. FARRINGTON.—I want to say a word in behalf of the dash chura. I have used a dash-churn all my life and I am able to bring the butter in its granulated form every time if it is tempered right; and I can stop when I get through as well as with any other churn. I can tell by the looks of the little lumps on the dash when it is in granular form and time to stop churning. I never want to sit down and churn. I am an advocate of the old-fashioned churn, and many of the farmers of Delaware county are using it to-day.

Mr. J. D. SMITH.—I am inclined to think my friend Farrington is in favor of the old-fashioned churn because he can do his churning with his Guernsey bull. Now we have got a Stoddard churn which we have

used for several years, and we do our churning with a Guernsey bull, and I think with considerable less labor. We formerly used the dash churn, but with the Stoddard we find we can bring the butter better and we can wash it and take care of it, and draw off the buttermilk and water, and do everything pertaining to it with a great deal less labor. We attach a tube and run the buttermilk off without a particle of lifting, and all we have to handle is the butter. It is certainly a great saving in labor at least.

Mr. SHULL.—Mr. Abell has finished the churning. He has been twenty-nine minutes in churning this butter.

[Specimens of the butter passed around and examined.]

Mr. BOURNE.—I would ask how you can salt butter in the churn if you do not know how much butter there is?

Mr. SHERMAN.—Knowing the quantity of cream I can tell within a pound of the quantity of butter I will have, and I always salt my butter in the churn.

Mr. BOURNE.—It is my deliberate opinion that the cause of so many dairies in the county of Delaware, and the town of Franklin, passing for second or third class, is because of this guessing; guessing whether it is warm enough by sticking your finger into the cream; heating the can hot on one side and leaving it cold on the other; guessing at the amount of salt to put into it, and taking it out and muxing it up with a paddle, and sending it to market.

Mr. SHULL.—Mr. Abell has got twenty pounds of butter from this churning of cream.

Mr. BOURNE.—The taste of the public has been educated for fresh butter, and they would rather have something not so solid, no matter whether there is a body to it or not.

Mr. MUNSON.—I would inquire of Mr. Bourne if he knows how much salt is actually left in the butter after he has worked and packed it?

Mr. BOURNE.—No, sir; I do not.

Mr. MUNSON.—Professor Roberts, of Cornell university, has experimented very carefully in relation to that very matter, and by two different modes of salting, one with brine and the other with three-quarters of an ounce of dry salt to the pound. He finds, by chemical analysis, that there is about a half ounce to the pound actually left in. Now, if it is true that half the salt, or nearly that, is worked out by the manipulation of the butter, then it is certainly guess-work, whatever way he salts it. The amount of salt worked out depends upon the amount of moisture in the butter when you commence to work it.

Mr. SHULL.—I will ask Mr. Abell how much salt he put in this butter?

Mr. ABELL.—One ounce to the pound.

Mr. SHERMAN.—In my own experience I never have salted butter so satisfactorily to myself as brine salting, and that was the only salting I gave it.

Mr. GILBERT.—Have you ever had any experience in keeping butter brine salted?

Mr. SHERMAN.—Not very much; I generally sold my butter at once.

Mr. GILBERT.—On the twelfth of last July I packed two tubs from one batch of cream, one salted with brine and the other with dry salt. I opened them about the middle of December, and the brine salted butter was worthless, while the other was apparently as good as it was the day it was packed. Both tubs sat side by side, and were treated exactly in the same way; and, I will say this, that when it was made, one was called as good as the other, and would have sold for the same in the market, although one tub would have had twenty-five to thirty per cent water in it and the other ten to fifteen. The brine salted had the water in it, which I think injured its keeping qualities.

Mr. BOURNE.—Then you would not recommend dairymen, who are going to hold their butter, to salt with brine.

Mr. GILBERT.—I would not; but to work it as dry as you can without breaking the grain, and then pack it closely.

Mr. SHULL.—Will Mr. Abell give us his process of making butter?

Mr. ABELL.—We work our butter four times over with the roller and let it stand twelve hours, and work it four times more and then pack it.

Mr. SHULL.—Do you consider it necessary to work butter as much as you do, to preserve it?

Mr. ABELL.—It is the best way we have found yet.

Mr. SHULL.—Mr. Gilbert, would you pack this butter immediately, or let it stand and work it again.

Mr. GILBERT.—I should finish it before it went off the butter-worker. It should go directly from the butter-worker into the tubs. I think you are more liable to break the grain by letting it stand twenty-four hours, and the butter is more apt to be salvy and sticky. I made butter from 400 cows one year, and I let the butter stand until the second day and gave it a second working, and then I experimented, and I found I had better results, better butter, and that it kept better to pack it immediately. I work it over until it looks just right. You can not lay down any specific rule for running the roller over it, but you have to use your judgment in the matter. You should be

careful and not break the grain of the butter. This butter now looks as though it was worked enough.

Mr. SHULL.—Mr. Gilbert, does salt add to the keeping qualities of butter?

Mr. GILBERT.—I should not dare to put up butter to keep without salt. I do not know but it would keep, but I would not dare to try it. I have churned butter, and when it was in a granulated form washed it until the water ran from it clear, and put it in tin cans and covered it with brine and salt, and I have spoiled 1,600 pounds of butter in one summer. That was owing to the water and moisture in the butter. I had some packed from the same cream that was as good in January as it was possible to keep butter. I took the butter when in a granulated form and put it on the butter-worker, added salt and stirred it in loosely, and let it stand a few minutes to dissolve the salt as nearly as possible before I ran the worker over it, and then worked it down for packing as dry as I could without injuring the grain. I pack it immediately from the butter-worker, so as not to handle it more than possible. I leave it on the butter-worker only a few minutes. The surplus salt will work off with the surplus water. I usually use an ounce of salt to a pound of butter, but for some customers, who wish it, I salt it a half ounce to the pound. I never use anything in butter but salt and clean water.

Mr. SHULL.—This milk was set in Orange county pans. The result of this churning shows twenty-two and one-half pounds of milk for a pound of butter.

Mr. GILBERT.—I am now milking seventy-five cows and my butter goes to New York and to the Thousand Islands; principally now to the hotels at the Thousand Islands. I have sold none this summer less than thirty cents, and I have no butter on hand, and orders unfilled. Last winter I got forty-five cents for my butter. I had a few customers who had taken butter five or six years who paid me forty cents. The reason why I get thirty to forty-five cents, when so much butter is sold for twenty-five, and eighteen and twenty cents, is that I make butter 365 days in the year just alike, and when I get a customer I can keep him.

Mr. SHULL.—Mr. Gilbert will do the churning this afternoon at 2 o'clock, and then the discussion on this subject can be continued.

Mr. BOURNE.—Mr. Gilbert, in what shape do you send your butter to market?

Mr. GILBERT.—My butter goes to market in prints. Sometimes we put it in Welsh tubs to order. I have some customers who take thirty-pound tubs, but my butter is mostly packed in pound prints and

shipped in tin boxes holding five pounds each, or in carrying cases. It goes in refrigerator cases.

MR. SMITH.—Mr. Gilbert, how much did your cows average last year, in dollars and cents?

MR. GILBERT.—I can not tell you exactly, but the year before they averaged over eighty dollars, and this year they won't do any better.

MR. SMITH.—Do you remember the statement you made last winter?

MR. GILBERT.—I said if I had a cow that would not give over 250 pounds of butter I would kill her, and if she didn't give over 300 I would sell her. If you are going to make butter you want a cow that is bred for butter; one that will give you the most butter for a dollar's worth of food, whether a Jersey, a Guernsey or a Holstein.

MR. BOURNE.—Did you ever feed cottonseed meal?

MR. GILBERT.—Yes; last winter I used four tons, and it was the best investment I ever made. I feed it in a mixture of equal parts corn meal, cottonseed meal and shorts; and with this ration I brought my dairy up to seven and a half pounds of butter to 100 pounds of milk. They had previously given a fraction over six pounds.

MR. BOURNE.—How were you feeding your cows when you got six pounds of butter?

MR. GILBERT.—I was feeding about seven pounds, equal parts corn meal and shorts, a day and what corn ensilage they would eat. I feed a little grain this time of the year, say about two pounds of bran a day as they come into the stable. I prefer shorts to wheat millings, pound for pound, for milch cows. I have also fed a mixture of oats. There is no better food for cows than oats, but they are too expensive. I feed ensilage twice a day and put my meal food on the ensilage. I think that shorts make the best food for cows before they come in. Cottonseed meal is a very rich food, and I would rather feed shorts if I fed any grain at such times. I prefer to feed three times a day.

Colonel MILLER.—We wish Mr. Gilbert to give us such experiments in feeding as he has made and the results. Professor Stewart has been teaching us for the past year that we have been losing twenty per cent of the value of our meal in feeding it separate from the hay or ensilage. I have practiced that wasteful method, and have about come to the conclusion that I have got to change my practice.

Chairman SHERMAN.—We will now take a recess until 1.30 o'clock.

AFTERNOON SESSION.

Chairman SHERMAN.—Ladies and Gentlemen: We have Mr. Gilbert with us, a gentleman of large experience in butter-making, who will now perform practical butter-making by churning of cream.

Mr. GILBERT.—We have the cream from 201 pounds of milk, put in the churn at a temperature of sixty-five degrees. This cream was set in a Cooley creamer, submerged setting, and it must be churned at a higher temperature than cream set with the open setting. After you have got your cream, if you do not take care of it you will lose ten to fifteen per cent of your butter. Last winter in figuring up my books I noticed that there were variations in the quantity of butter I was receiving, at times. At one time I got six pounds of butter to a hundred pounds of milk, and previous weeks I had got only five pounds to the hundred; and found the cause of the variations to be this: In skimming at night the cream would be warmed up to a churning temperature for curing, and in the morning the morning skimming would be warmed up to put with the other for curing, I found in that way I didn't get as much butter within ten or fifteen per cent as I did when I kept the night skimming cold, so it would not change. When I got the morning skimming, I put them together and warmed them together, and they cured equally. I made as many as twenty different experiments of that kind, and satisfied myself in the matter. I warm my cream up to a churning temperature, and hold it there until it gets slightly sour, or until it gets so it looks like satin when you stir it.

The secretary has had a cream agitator made. It is a very nice instrument to stir cream with as you see, it is in form like a lampshade. The first skimming is at the bottom, and you put this in and press it down two or three times through the cream, and the cream in the bottom will be forced to the top, and thoroughly mixed.

Mr. WARRINER.—Can you explain to us how we may know when cream is ripe.

Mr. GILBERT.—I want the cream slightly sour, and to look soft like satin when mixed, and not thick, and not lobbered.

Mr. WARRINER.—Do you think it is proper to let cream stand and get sour or lobbered before skimming, with the open setting?

Mr. GILBERT.—I think not. I use the submerged setting, and am talking about that system. I think open setting of cream requires different handling. I have two cans for curing my cream; one that will hold enough for 200 pounds of butter, and another 100 pounds. You should stir your cream often; whenever you go near it. It is the air that helps the butter. There is no way that you can make better

butter than with the open setting, if the surroundings are all right. It is the oxygen that helps give butter that nutty flavor, and in ripening the cream you should get all the air that you possibly can into it.

Mr. MUNSON.—I want to emphasize that point. Our dairymen here are mostly engaged in individual dairies of fifteen, twenty or thirty cows; and a difficulty arises in the fact that the cream ripens immediately and has to be mixed with cream from later milkings and consequently some is riper than other portions. In deep setting the cream is kept cold until you get enough for a whole churning, and then you mix it and ripen it together, and get better results.

Mr. GILBERT.—As to that I will say, when you use the open setting, and put one batch of cream with another, you should stir it thoroughly.

Mr. MUNSON.—When you put cream of one milking with cream of another, it is unevenly ripened. It should not be churned till the whole has evenly ripened, or you lose a percentage of your fresh cream.

Mr. GILBERT.—This churning is now done. It was nineteen minutes in churning; temperature, sixty-five degrees. I usually churn at sixty-seven degrees.

Mr. A. W. ASHTON.—If you were packing your butter would you churn it at that temperature, and wash it with ice water?

Mr. GILBERT.—Yes, sir; but I do not use ice water except in extremely warm weather; I use ordinary well water.

Mr. ASHTON.—In churning at that temperature you have got to use ice, or it would be too soft to work, would it not?

Mr. GILBERT.—I do not care to have water any colder than fifty degrees for washing butter.

The temperature of the water with which I washed this butter was forty-nine degrees. You will notice that I mix this salt through the butter instead of working it through.

Mr. SHULL.—It took nineteen and one-half pounds of milk to make a pound of this butter. Mr. Merrill, what breed of cows have you?

Mr. MERRILL.—I have a mixed breed; grade Ayrshires, Guernseys, and Jerseys; no full bloods; I have more Jerseys than others.

I put in this churning about one-fourth of a teaspoonfull of Hanson's butter coloring. I always use a little coloring. This cream was raised by submerged setting.

Mr. SHULL.—I will ask Mr. Abell what breed of cows he has, from which the milk of this mornings churning was taken?

Mr. ABELL.—Principally natives; I have a few grade Jerseys. I think Mr. Merrill has more Guernseys and Jerseys than I have.

Mr. GILBERT.—If you take a cow that will give you milk that will produce six pounds of butter to the hundred, and set the milk beside that of one that will give four pounds of butter to the hundred, you will then see the difference in the milk and in the breed. One of these dairies gives richer milk than the other.

Mr. SHULL.—The question then arises whether the grasses on which they feed differ, and how much more grain one may feed than the other. One of these dairies is on the west side of the creek and the other on the east.

Mr. MILLER.—How much more are you getting for your butter by your manner of packing it?

Mr. GILBERT.—I can not tell. I do not think it costs me as much, really, to put it into prints as it would in tubs, because the carrying cases are returned, and all I am out is the cloth and labor.

Mr. MILLER.—Could you, or anybody that makes equally as good butter, get the prices you do if you packed in tubs?

Mr. GILBERT.—It depends largely upon your customers. Some might prefer tubs. You can not ship butter to the market in prints and sell it; you have got to have your customers.

I find, after weighing, that there is now ten and one-fourth pounds of this butter packed, which is a fraction over five pounds to the hundred of milk.

Mr. SHULL.—Perhaps the audience would like to know the difference in the two churnings. Milk from Mr. Abell's dairy, at this morning's churning, took twenty-two and one-half pounds of milk to make a pound of butter; and that of Mr. Merrill's, this afternoon, it takes nineteen and one-half pounds, a difference of three pounds.

Mr. TRACY SCOTT.—How much will your butter swell or shrink between the time when first taken from the churn and when it is ready for market?

Mr. GILBERT.—That depends upon how much water there is in it when you weigh it, and how close it is worked down. Some will shrink from five to ten per cent. If there is an excess of water it will carry off the extra salt; so it depends upon the amount of moisture in the butter; it will almost always shrink five to ten per cent. This butter was very dry when it was salted, that was the reason it didn't shrink more.

I have been asked if I think milk can be cooled enough in the Cooley creamer to injure it while the cream is rising. I do not think it can. If you will fill your creamer with milk, and cover it with ice, you will get all the cream, and your milk and cream will be sweet. The sooner you can get it under water the better. The ice water will

draw the animal heat out. You can take spring water and fill your creamer with it and it will soon have a bad odor, which it has drawn from the milk.

Mr. SCOTT.—Can you make as much butter by mixing two milkings together, for instance, nights milking with mornings milking?

Mr. GILBERT.—I do not think you can, and I do not think you can get as good quality.

Mr. SMITH.—Have you ever discovered these little dark-colored drops that collect on top of the milk or cream, after removing the cover, after it has been submerged?

Mr. GILBERT.—I have, and I think it is moisture that accumulates on the cover, but I am not positive what it is.

Mr. SMITH.—Is it not the condensed moisture containing the impurities? I am at loss to know where the impurities go. It seems to me the cream will absorb more or less of that impurity when it is under the water and perfectly tight.

Mr. GILBERT.—The principle of it is that the cold water absorbs the impurities; it being colder than the milk, will draw it out; and as long as the water is colder than the milk, you will have no impurities in the milk.

Mr. MUNSON.—I think the people here would like to hear Mr. Gilbert talk a little on the subject of ensilage. The farmers in this locality have not had experience in that kind of feed, and would like to know more about it.

Mr. GILBERT.—I will say this in regard to ensilage: Any man who can raise corn can not afford to feed hay exclusively to his cows. He might better sell his hay and raise corn, and make ensilage to feed. I have fed ensilage for seven winters, and part of this time without any other fodder whatever. For three or four winters I have fed my milch cows entirely on ensilage, and have made butter from the milk with good results, although I think cows should have a variety of food.

I have 124 acres under cultivation and in meadow, and about 250 in pasture. Ten years ago I couldn't raise forage enough to keep more than fifteen cows; but since I commenced to raise and feed ensilage, I have brought my farm up so that last winter I had grain, ensilage, hay and straw enough to winter from 135 to 140 head of cattle. My farm was once an old pinery and is mostly a sandy soil.

Last year I put in about one hundred tons of corn, cut when it was ready to cut for the grain, and put it into a wooden silo. I cut it one day and drew it in the next, and when it was full I covered it with straw, and put plank across on top of it and a row of stone around on

the edges. One trouble about ensilage souring is that the corn is put in when it is immature. I think it injures corn that is frosted, although I have had some that I could not see any difference in. You can not expect good silage if you do not put in good corn. The corn should be well matured. I have three stone silos, and one wooden one built in an old bay in my barn, of rough hemlock boards, and I would as soon have the wooden ones as those others built of stone. A man living about six miles from my place, visited my dairy a number of times to satisfy himself as to the use of ensilage as cattle food, and finally built a silo. He had been in the habit of keeping six cows and a team on his farm of about forty acres. Last year he put in four acres of corn, and he and his son did all the work, except to hire one man with a team to help cut it; and off of that four acres he wintered eighteen cows, the most of them in milk, and he said it was at least \$250 profit the first year.

I think the corn should be matured, and have ears on it to make the best ensilage. I will say that I can make better butter with ensilage and grain than I can with hay and grain, and it will keep just as well. When ensilage is put in without cutting it is a little more trouble to take it out, but the cows will eat every particle of it.

In building a silo in your barns, you should smooth down the wall under the barn, and grout the bottom with stone and water-lime, and side up the inside of the frame with rough hemlock boards put on double. It may be necessary to put in an extra girt or two. By putting whole corn in, you do not have to go to the expense of buying a cutter and power to run it. It doesn't require much pressure; simply enough to preserve the top. I usually put on a load of straw before putting on the plank, and then put on two or three tons of stone.

Question.—How do you apply manure to your land?

Mr. GILBERT.—I draw directly from the stable to where I am going to plow in the spring, and spread it, and then plow it under. I get a better yield where I plow it under. My soil is sand and gravel. I plowed this season as near ten inches as I could. Last year I plowed about nine inches, and the result was, with our dry weather, my corn grew all summer. I generally grow ensilage corn two years on the same piece of land, and then seed it and mow it a couple of years.

Mr. MUNSON.—Mr. President: The time has now arrived to close this meeting, and before we adjourn our thanks are due to the State Dairymen's Association. They are certainly entitled to our gratitude and to our thanks. The State has made an appropriation for the purpose of disseminating knowledge in the matter of dairying through-

out the State, and these gentlemen have come here in the discharge of that duty, and I move that a vote of thanks be given to the gentlemen who have given us this entertaining and interesting meeting.

Carried unanimously.

President SHERMAN.—Ladies and Gentlemen: We are about to go to our homes, and I trust we will all profit by what we have heard to-day. There have been many things said that ought to be remembered and carried with us in our work on the farm; and let us try to do this, and then we shall get a good return from this day's work, and be especially benefited thereby.

I now declare this meeting adjourned.

Conference at Hubbardsville, June 29, 1888.

A conference was held at the cheese factory of Franklin Blandling, at Hubbardsville, Madison county, N. Y., on the 29th day of June, 1888, to illustrate cheese-making.

Mr. G. A. Smith, of Frankfort, Herkimer county, Mr. W. W. Hall, of Gouverneur, St. Lawrence county, were present as instructors.

Three thousand three hundred and forty pounds of milk were put in vat No. 1 and superintended by Mr. Vannais, as maker. Three thousand four hundred and eighty-nine pounds of milk were put in vat No. 2 and superintended by Messrs. Hall and Smith, as makers.

Cheese-makers and dairymen from various localities in the State were present to witness the process of manufacture.

Mr. J. S. Shattuck, president of the New York State Dairymen's Association, acted as chairman.

Mr. SHULL, secretary of the New York State Dairymen's Association.—Ladies and gentlemen: I presume you all understand that the object of this meeting is to illustrate cheese-making, and having witnessed the actual process of manufacture this forenoon, we will now listen to Mr. Hall while he states his process of manufacturing, and then you will be at liberty to ask him such questions as you may think proper.

Mr. HALL.—We first apply the heat until the milk reaches the temperature of eighty-two degrees. The reason for this is, that the lower the heat we can do the work with, the more butter-globules we retain; the higher the heat the more we lose.

We heat the milk for the purpose of applying the rennet extract to coagulate the milk. That is the first step towards expelling the whey. The next step is cutting the curd. During this time we calculate the amount of rennet necessary to coagulate the milk, so it will thicken in fifteen to twenty minutes at eighty-two degrees of heat. In from forty-five minutes to an hour from that time we want the curd ready and sufficiently hard to cut. We cut with a horizontal knife first, believing that as the cells that contain the whey run up and down the vat, we tap them and they drain better. Then we use the perpendicular knife, cutting length-ways and cross-ways with that.

Then we stir from ten to fifteen minutes gently, giving the curd a chance to harden before we apply the heat again. We then apply the heat carefully, keeping the curd stirred until we reach a temperature of ninety degrees. After that we are not so particular whether we heat slowly or faster, until we bring the temperature to ninety-eight or 100 degrees. We have then reached the highest heat. We used an hour to-day in running our heat from the time we applied it, or from the time we commenced hand-stirring until we raised it to 100 degrees. We did this because that degree of heat seems to be about the degree which assists the rennet in dispelling the whey best. We keep this temperature up and keep the curd stirred loosely, because it gives the heat a better chance to assist the rennet in expelling the whey. We then keep this curd stirred up and do not allow it to solidify in the vat until we reach first signs of acidity. We allow the acid to develop until we can draw a quarter inch on a hot iron before we draw the whey. Then we draw the whey off entirely and drain the curd as well as we can, and pile it and cover it up, keeping the temperature at ninety-eight degrees. When it is fully matured, our next process will be to run it through the mill and apply the salt; and from the time we commence grinding it until we put it to press, we calculate to stir it and air it until it reaches eighty degrees, at which temperature we put it to press. With a higher temperature than that it has a tendency to press out more of the fat.

At this season of the year we use two and a half pounds of salt; but in the spring, when milk does not yield so well, two pounds is all I use to a thousand pounds of milk. Salt checks the acid and makes flavor in maturing cheese. With good extract of rennet we use from two and a half to three ounces of rennet to the thousand pounds of milk. For a good keeping cheese you want extract enough to coagulate the milk in fifteen or twenty minutes, and so it will be ready to cut in from forty-five minutes to an hour.

MR. ROCKWAY.—How much rennet did you use this morning to 1,000 pounds of milk?

MR. HALL.—Three and one-half ounces to the 1,000 pounds. To make good cheese we want the milk only from healthy cows, and cows that are all right in all respects. The cows should have pure water, and have all they want of it. They should not be allowed to drink from stagnant pools where the water is dead or contains any decaying matter. Stagnant water causes tainted milk, which sometimes produces our floating curds. Cows should have access to salt at all times. Foul odors and filthy stables have a very bad effect upon milk. Cows should not be allowed to eat or drink anything that would give a taint

to their milk. They should be milked regularly. The milk should be drawn into scrupulously clean vessels, and should be aerated by some process as fast as drawn from the cow.

Mr. SHULL.—What effect does excitement of cows have upon the milk?

Mr. HALL.—It has a bad effect. When the milk comes in contact with the air, unless taken care of immediately, it taints. The cow is overheated and her milk taints easier than as though the cow had taken her time in coming to the stable, and I think it has an influence in quantity and quality of milk.

Mr. SMITH.—I do not think it makes much difference in cheese whether cows drink soft or hard water.

Mr. BLANDING.—Would you added more rennet or less if you had tainted milk?

Mr. HALL.—I would add less rennet, because more rennet has a tendency to ripen faster. In handling tainted milk you should add less rennet and give it plenty of hand stirring, and keep it stirred for an hour, or an hour and a half, or more if necessary, and I should be very anxious to keep this temperature up all the while, and keep it covered, and let it pack until the gas cells flatten out and the gas is expelled.

Mr. BLANDING.—Would you salt cheese from tainted curd any more in your process than you would any other?

Mr. SMITH.—Where you add over two and one-half pounds of salt you will make a dry, hard cheese and one that will have to stand a long time before it will break down and cut in the shape you want it.

Mr. BLANDING.—I think two and one-half pounds of salt is sufficient where the curd is ground, but is not enough where it is not ground.

Mr. CHRISTIAN.—How many causes are there for tainted milk, and what are they?

Mr. HALL.—My experience shows there are several causes. One is the improper care of milk over night; keeping it in poor rusty cans, and not aerating it, and allowing it to stand where the atmosphere is impure, and shutting it up tight, and bringing it to the factory without getting out the animal odors; and another cause is impure water; another cause is harsh treatment of the cows.

Mr. CHRISTIAN.—What would you say was the principal cause?

Mr. HALL.—In my experience at home the main cause is improper treatment of the milk. A week ago a patron came to my factory with milk badly tainted, and I sent it home. The next morning his milk was perfectly sweet. That proves he was to blame for its tainted condition.

Mr. HAYNES.—How many pounds of milk does it require for one pound of cheese in the method of manufacture pursued to-day?

Mr. HALL.—There is difference in localities. At my factory at Gouverneur my last sale took ten and twenty-three hundredths, which was from June fifth to June eighth, both dates included.

Mr. SHULL.—Mr. Haynes, how many pounds of milk does it take for a pound of cheese at Lyon Brook factory?

Mr. HAYNES.—For the month of April it took ten and thirty-five hundredths pounds of milk for one pound of cheese.

I would ask Mr. Hall in regard to setting the milk in the vat at eighty-two or at eighty-six, which he thinks would produce the largest amount of curd?

Mr. HALL.—The lowest temperature is the best and will yield the most curd. At eighty-six it has a tendency to drive out more butter globules and make it dryer.

Mr. SHULL.—I assume that Jersey cows make more cheese from a pound of milk than do ordinary breeds of cows.

Mr. CHRISTIAN.—At West Camden last season the milk of one dairy of forty Jersey cows was made up separately, and it took only eight pounds of their milk to make a pound of cheese, while from the rest of the dairies in the factory it took ten pounds to make a pound of cheese.

Mr. HAYNES.—I would like information by the other cheese-makers here on the question of how many pounds of milk it takes at their factories for a pound of cheese, taking the whole season through?

Mr. CHRISTIAN.—A neighbor of mine makes cheese by the hundred and his figure last year was ten pounds.

Mr. BLANDING.—It took 10 12-100 at this factory last year for shipping cheese; and 9 75-100 in Delaware county for home trade cheese. At Brookfield a little less than ten pounds. It took more milk last year than ever before since I have been in the cheese business, twenty-three years. In Brookfield it never took ten pounds of milk to a pound of cheese for a season, for the twenty years I have run a factory there. I find that with pasture on low lands and on river flats it takes more milk to the pound than on upland pastures.

Mr. HAYNES.—Last year, for the seven months at the Lyon Brook factory, it took on an average of 9 34-100 pounds of milk to make one pound of cheese. The average for the last seven years has been below 9 41-100. About half of our cows are common grades and the balance Holsteins, Durhams, and some grade Jerseys, and grade Ayrshires. Most of our pastures are on high lands.

Mr. SHULL.—I notice Mr. Blanding has a creamer in his factory, and I understand is manufacturing butter from Jersey cows.

Mr. BROWNELL.—The butter we had to-day was from my Jersey herd. I do not believe there is any better butter made than is made from Jersey cows.

Mr. SHULL.—What is the best percentage you have ever known in your dairy?

Mr. BROWNELL.—Mr. Skerret, of Deansville, tested two of my herd in December, and he said one gave forty-two per cent cream, and the other thirty-seven per cent. The Jerseys are cows that require to be well taken care of. They are nervous and should be very gently treated.

Mr. BROWN.—I would like to ask if Mr. Brownell fed these cows any grain when this test was made?

Mr. BROWNELL.—They were fed two pounds of meal and two pounds of bran mixed; that is all the grain they had.

Mr. SHULL.—We are all aware that it takes a certain amount of feed to sustain nature, and if there is any profit in a cow it must be gotten from the extra feed she eats. I believe you will all agree with me the cow is a machine for making milk; and the more feed you can get through the machine the better the results.

President SHATTUCK.—The hour of adjournment has arrived; I therefore declare this conference adjourned *sine die*.

Conference at Canton, July 20, 1888.

A conference was held at the cheese factory of Ansel Watson, in the village of Canton, St. Lawrence county, N. Y., on the 20th day of July, 1888, to illustrate cheese-making.

At Mr. Watson's factory, home trade cheese is manufactured exclusively for the Boston market.

There were present from abroad, Josiah Shull, of Ilion, N. Y., secretary of the New York State Dairymen's Association; Harvey W. Richardson, of East Aurora, Erie county, N. Y.; G. A. Smith, of Frankfort, N. Y., and W. W. Hall, of Gouverneur, N. Y.

Vat No. 1, was in charge of W. W. Hall, of Gouverneur. Pounds of milk used, 5,399. Set at a temperature of eighty-four degrees.

Vat No. 2, was in charge of J. C. Birge, of Heuvelton, and Theodore Miller of Odgensburgh. Pounds of milk used, 5,125. Set at eighty-four degrees.

Vat No. 3, was in charge of G. A. Smith, of Frankfort. Pounds of milk used, 3,903. Set at a temperature of eighty-four degrees.

Adding rennet, stirring, cutting and drawing the whey, same rules observed as in former process.

In the afternoon while the curds were curing for the hoop, the audience comprised of cheese-makers mostly, convened at the board of trade rooms, a short distance from the factory.

Mr. M. R. WAIT, secretary of the St. Lawrence county board of trade, moved that Mr. W. H. Lewis be made chairman of the meeting. Motion carried.

Mr. SHULL.—Mr. Chairman, Ladies and Gentlemen: This conference is held for the purpose of illustrating cheese-making, and to discuss such points as pertain to the best methods to be pursued in order to make a high grade of cheese. To secure the best result, certain things and conditions are necessary to be observed and carried in practice.

These questions cover the cows, their food, water, health, treatment, milking, and the handling of the milk from the time it is drawn until it reaches the cheese-maker. These are questions essential to be observed in the making of cheese.

We have Mr. Smith with us, who has manufactured one of these vats to-day in your presence, who will give his process of manufacture.

MR. SMITH.—The amount of milk in the vat handled by me this morning was 3,903 pounds. The milk was good. We brought the temperature up to eighty-four degrees, and added the rennetine at 7:40. It was stirred for twelve minutes after adding the rennetine, and it thickened in thirty minutes from the time it was added to the milk. At fifty-five minutes it was cut horizontally through lengthwise of the vat, and then perpendicular lengthways and crossways. I then commenced stirring the curd carefully thirty minutes before there was any more heating of the curd. I usually intend to stir it about fifteen minutes before I commence heating. It was one hour and thirty minutes from the time I finished cutting until I turned off the heat at ninety-eight degrees. Started the whey at 1:25, and got it off at 1:50.

MR. BIRGE.—At what temperature would you put it to press?

MR. SMITH.—I would not want to have it over eighty when I put it to press.

MR. AUSTIN.—At what temperature should salt be applied to the curd?

MR. SMITH.—I never pay any particular attention to that, but salt it when the curd is sufficiently cured.

MR. MESERVEY.—What causes greasy or slippery curd, and how would you handle it?

MR. SMITH.—By taking the whey off as soon as possible and packing them up, and covering them, and putting on a jet of steam under the covering, to keep the temperature up, and turning them occasionally, and piling them up until I can get the digestive process to commence.

MR. BIRGE.—I do not want to leave this question of slippery curds at present. There is some cause for it. This curd, I handled, has not got the right flavor, and I am looking for a development of gas in it; and in order to get that I would let considerable acid develop; then grind and salt it and let it lie two to three hours. I would let it lie to expel the odor it contains.

MR. HOTCHKINS.—How do you determine when it is ready to grind?

MR. BIRGE.—By its feeling; by its consistency; we want it so it will strip apart; so you can pull it out and make ribbons of it; and further than that, if it had a bad odor, I would not salt it until I could squeeze the oil out of it in my hand, so I could see it come through my fingers; and then I would let it lie piled up in the vat or sink two hours or longer, and then break it up and put it to press.

Mr. SHULL.—What effect does the development of acid have upon the fats in the cheese?

Mr. BIRGE.—Under certain conditions, the effect is to separate the fat, and will take more milk for a pound of cheese.

Mr. MILLER.—How is it that it takes more pounds of milk to make a pound of cheese than it did years ago?

Mr. BIRGE.—We make a different cheese. Years ago cheese was made with more whey in it.

Mr. RICHARDSON.—The action of the acid on the surface of the curd has a tendency to loosen a certain amount of the butter; but you have to develop a certain amount of acid in order to make a good, firm cheese.

Mr. SHULL.—Suppose you develop less acid, would you have a richer cheese?

Mr. RICHARDSON.—Possibly; you would have more butter in the curd; but you would not get a cheese that would pass for No. 1 shipping cheese.

Mr. SHULL.—The acid eats the fats, and in order to remedy that, you would develop less acid and have a richer cheese, would you?

Mr. RICHARDSON.—You would have a richer cheese, but it would be a softer, lighter-bodied cheese.

Mr. WAITE.—Mr. Richardson, how much milk does it take for a pound of cheese, according to your process?

Mr. RICHARDSON.—The average with us ranges from ten and one-fourth to ten and one-half pounds.

Mr. MILLER.—Mr. Birge, does delivering milk to the factory once or twice a day have anything to do with the amount of milk necessary to make a pound of cheese?

Mr. BIRGE.—Since I have adopted the Cheddar plan, and have taken my milk in once a day, I know it has taken more milk; and I find that the more pains I take to get this close shipping cheese, the more milk we take, everything else being equal. I have taken my milk in once a day for the last five or six years.

Mr. MILLER.—My experience has been that by delivering the milk twice a day to the factory, you get enough better yield to pay the extra trip. Because the milk is kept all alike in the factory. Farmers would get just as much by delivering once a day, if they would take proper care of the milk—the same care as it received at the factory.

Mr. BRAINARD.—If milk is allowed to get a heavy cream on it, it will not make as much cheese as though it was properly stirred and cared for. The cream can not be worked back.

Mr. SMITH.—You can not hurt the milk if you stir it thoroughly and give it plenty of air. I have a case in mind of one of my patrons putting his milk in a fountain in the summer and stirring it a little, and then leaving it there; the result was, his milk was tainted. Milk should be frequently agitated till it is cooled down to about the temperature of the atmosphere surrounding it.

Mr. LANDON.—I would like to ask Mr. Birge if his milk works as it did ten or twelve years ago?

Mr. BIRGE.—Milk does not work as it did ten or twelve years ago. It is in a better condition, owing to the educating of the farmers. I insist on having good milk, and will not take any other if I know it. I think there is more milk spoiled in cooling too much without properly airing it, than there is in any other way. We are never bothered with sour milk in the summer time; the trouble is with tainted milk, and generally where it is the worst, it is the coolest milk we get. It is hard work for a farmer to understand this, but I get my people educated to that point, and I insist on their airing their milk thoroughly before they attempt to cool it.

Mr. HOTCHKINS.—Did you ever have milk come to your factory that would turn thick and be perfectly sweet?

Mr. BIRGE.—I have had milk come to the factory that was coagulated on the bottom and would not go through the strainer. I can not give the cause of it.

Mr. AUSTIN.—I would ask is there no way whereby we can hasten the manufacture of cheese aside from putting in something to acidate it, such as whey and sour milk, or something of that kind? I have understood that the milk can be heated up to a certain degree and then cooled back again and it will hasten the manufacture.

Mr. BRAINARD.—I heat my milk to ninety-two degrees cool it back, sometimes two degrees and sometimes six or eight, according to the smell of the milk; there is a peculiar smell I am guided by in setting my milk. I cool back with cold water, to eighty-three or eighty-four degrees.

Mr. HALL.—At what temperature will milk keep perfectly sweet and be in the best condition to make good cheese?

Mr. SHULL.—Mr. President: We have Mr. Richardson, of Erie county, with us, and I would ask him in what condition he receives milk at his factory, and how it is cared for from the time it is milked from the cows until it reaches the factory; and also to state what conditions are necessary in order to keep milk perfect.

Mr. RICHARDSON.—You have covered the ground very fully here to-day. You have the same ideas that we have in regard to bringing

milk to the factory, and it would be very much better if it could be brought to the factory ripened and ready for use; but we have not yet got our patrons in Erie county worked up to the point of properly taking care of their milk in all instances, and we have to resort to the use of sour milk; but when there comes a cool night and we are caught without sour milk, we ripen it by heating the milk and then letting it fall back.

Mr. SHULL.—Do you think it would be of benefit to the farmers to properly aerate their milk before bringing it to the factory?

Mr. RICHARDSON.—I do; I think cooling the milk too much is injurious. I think the majority of our patrons during the hot weather use no water in cooling their milk; it is done by stirring and agitating it.

Mr. BIRGE.—I agree with that idea. I think the morning milk should be aerated as well as the night's milk, especially if the farmer has far to go to the factory. It is carried in a tightly covered can, and it is impossible for the animal odor to escape from it.

Mr. LANDON.—What, in your opinion, is the cause of gassy milk?

Mr. SMITH.—I think one reason is cooling the milk too much and too suddenly, without getting out the animal odor.

Mr. WAITE.—I move a vote of thanks to Mr. Watson for the courtesy he has extended in giving the use of his factory in making these experiments to-day. Motion carried.

Mr. WAITE.—If there is nothing further I move that we now adjourn.

Adjourned *sine die*.

[Assembly, No. 106.]

Conference at Kirby Homestead, Charlton, Saratoga County, June 11, 1888.

The fourth conference of the series was held at Kirby Homestead, the residence of Colonel F. D. Curtis, in Charlton, N. Y., on the 11th day of July, 1888.

There were present from abroad, Hon. J. K. Brown, State Dairy Commissioner; Dr. R. D. Clark, Chemist of the Dairy Commissioner's Department; B. F. Van Valkenburgh, Assistant Dairy Commissioner, and E. S. Munson, as expert of the process of butter-making.

Colonel CURTIS.—Ladies and Gentlemen: This meeting is held under the auspices of the New York State Dairymen's Association. Mr. Shull, the secretary of the association, is present, and will explain the objects of the meeting. Mr. Skinner, the president of the Charlton Agricultural Society, will act as president on this occasion.

Mr. SKINNER.—Mr. Shull will state the purpose of the meeting.

Mr. SHULL.—Mr. President, Ladies and Gentlemen: We have met here to-day for the purpose of talking about and practically to illustrate the process of butter-making. The idea of holding butter conferences throughout the State originated in this county, and Colonel Curtis is the father of the idea.

In butter-making it is necessary that certain things be done. In the first place, we must have cows suitable for making butter. These cows must have proper food and drink, and the milking must be done regularly and with cleanliness. Then the milk must be strained and set in a proper atmosphere in order to raise the cream before the milk sours. Then the cream must be brought to a proper condition of ripeness in order to make good butter. Then the churning must be done at a proper temperature, and the salting and preparing for use.

We have Mr. E. S. Munson, of Franklin, Delaware county, with us to-day, who will give a practical illustration of butter-making and explain his process.

Mr. Munson here commenced the churning, which was done in a Mosley & Stoddard churn. The churning was done with a pony on a tread-power.

While the churning was going on, Colonel Curtis called attention to different samples of cream, in different stages of ripeness, which were examined.

At this stage of the proceedings the churning was finished and butter placed in butter-worker.

Mr. MUNSON.—I wish Colonel Curtis to make a preliminary statement in regard to his cows, their feeding, and the process of raising cream, before I proceed with my remarks.

Colonel CURTIS.—My dairy consists of twelve cows, ten of which are Jerseys. They are fed at the present time, in the morning, three quarts of wheat bran mixed with one quart of cottonseed meal, and turned to pasture; and at night, when brought to the stable, they are fed grass in the manger.

The milk from which this butter is made was from ten Jersey cows, two of which are two-years-old heifers. The cream is from 224 pounds of milk, taken off in twenty-four hours, and was raised by the submerged cold process. The temperature of the cream when put in the churn was sixty-two degrees. The temperature of the room where the cream was raised was from sixty to seventy degrees, varying during the day and night. There was 224 pounds of milk, which has made one pound of butter from 16.59 pounds of milk.

Mr. MUNSON.—This cream was put in the churn at a temperature of sixty-two degrees, and it came in this granulated state. My experience is that in cold setting you can churn your butter at a warmer temperature, and our experience to-day has proven that this might have been churned a little warmer, and we would have saved some time and had as good results as we have now. At Franklin, a short time ago, we churned the cream from two different dairies where the men were expert butter-makers. One had worked in a creamery twelve years, and he raised his cream by the Cooley process, with ice water, and he churned at sixty-five. In the other dairy the cream was raised in the Orange county pans, the old-fashioned open setting with cold water running under it, and he churned his at sixty; and the butter was nearly equal in quality. This cream was kept in milk pails while curing.

Mr. VAN VALKENBURGH.—I would like to ask whether you favor salting on the butter-worker or in the churn, and your reasons?

Mr. MUNSON.—I am in favor of salting in the churn. We have salted this to-day by mixing the salt through the butter. I prefer salting in the churn. The first I ever salted in the churn was some years ago; I was running a creamery, and my foreman was a practical man, and he had been in the habit of salting in the churn. I told

him to go on and salt in the churn for a week, and if we heard no complaint from New York where we were sending the butter that we would continue to salt in the churn. No complaint was made, and we have continued that process ever since. It is a much easier, handier and quicker way, and that is the reason we continued it.

Mr. VAN VALKENBURGH.—In salting in the churn, how did you mix it?

Mr. MUNSON.—By revolving the churn at the usual velocity.

Mr. VAN VALKENBURGH.—How do you know the quantity of salt to put in?

Mr. MUNSON.—That is a question I am glad you have asked. Any person who is running a creamery or a dairy will know by the quantity of cream almost within half a pound what amount of butter it will make, and will salt accordingly. It is largely guess-work in salting butter, because the salt dissolves in working, and a certain portion will be worked out, and how much we do not know, and, therefore, it is guess-work.

Professor Roberts, of Cornell University, remarked somewhere in my presence that he had tested brine salting, and salting with three-fourths ounce dry salt, and in a chemical analysis he had found very nearly the same amount of salt by each process, and that about one-half ounce to the pound was retained in the butter. So, it seems to me, we can salt butter as well in the churn as out, and get it as evenly distributed.

Mr. WELD.—I generally let the buttermilk drain very thoroughly from the churn and use brine for the last water, and then work it in a Blanchard worker.

Mr. VAN VALKENBURGH.—Then it would take a certain amount of salt from the brine?

Mr. WELD.—I can not say that; I have tried to do salting with brine, but I can not make it work.

Mr. SKINNER.—Will not butter be of a better color when set in the old-fashioned setting than in the cold setting.

Mr. MUNSON.—I do not think it will. If the cream is exposed to the air in ripening it has the same effect as though the old-fashioned setting were used.

Mr. VAN VALKENBURGH.—I was brought up and passed my boyhood in the dairy, and have handled butter in New York for the past twenty-two years. I have made a specialty of handling fancy goods, and I must say that this sample of butter, made here to-day, is a perfect sample of goods. I can see no fault whatever with it, and I am surprised to find it so, because it was made under unfavorable

circumstances. Any one familiar with the manufacture of butter must know that the maker who can take it from the churn in the creamery and work it, and have no one around, and not have to bring it out into the air, as this was, that he has a great advantage. I did not expect to see this come out as it has. Some years ago Orange county was supposed to produce all the fancy butter ; a little later Chenango and other counties developed into fancy butter-making. Then the west sprung up and made some very nice butter ; and now New York State is producing a larger percentage of fine goods than heretofore. There can easily be five cents a pound added to butter by taking proper care of the milk, setting it properly and churning it at the right time, and working it right. Care and attention is what is required to make fine butter.

As I before remarked, the west at one time made practically no fine butter. Their butter was all of a grade of five to ten cents a pound less in value than New York State butter. In the west if a man knows how to make a little better butter than his neighbor, he tells how he does it.

There are different ways of making fine butter, but it seems to me there are some points that must be looked after with the same care and attention, as Mr. Munson has told us. The milk must be properly set ; the cream properly attended to and skimmed in proper manner ; churned at the proper time, and worked and salted and packed in a proper way. There are a number of processes of setting, and I think, if properly done, there is very little difference in them. This system of education brought about the manufacture of very fine butter, so that about five or six years ago the west gave New York a very close race on fancy goods. In this State the past few years, I am happy to say, the dairymen have been educating themselves. It is very important that the dairymen of New York make fine butter, and butter that will bring the best price. There need be no fear of overstocking the market with fancy goods. We are always overstocked with common, low-grade goods. The market should be well supplied with fresh made goods, especially in the summer, after we have passed by the June and July product. We usually have an advance in prices in August and September.

Farmers usually make a mistake that they do not sell their August and September butter when it is fresh. There is a difference in the price of this State butter to-day of five to ten cents a pound, between the highest and lowest grades. The question is : "How can I make my goods to bring me the highest price and the largest profit?" I think the answer to that question is to be found in the proposition that the

State send experts around through the State teaching the farmers and arousing an interest in the business. I believe these schools will be a benefit to the dairymen of more than \$100 for every dollar expended. The only trouble, in my opinion, will be to get the farmers together, and get them to appreciate what the State is doing for them. Butter-making is a science, and every butter-maker should go to school to learn the science, if they do not understand it already.

Mr. MYERS.—How does butter made by this new process compare in its keeping qualities, with that made by our mothers in the old-fashioned way?

Mr. VAN VALKENBURGH.—I think the butter will keep equally as well; but the question of how long butter will keep is not the principal question. The question is how to make butter that will bring the highest price when sent fresh to market. I believe that butter made in June and July, if kept until fall, will be kept at a loss to the maker.

Mr. MEYERS.—That has not been our experience here. In June and July we get a lower price than at any other time of the year, and, therefore, we make it a practice of packing our butter and holding it until September or October, when there is a greater demand for it, and we frequently hold it until the holidays.

Mr. VAN VALKENBURGH.—My experience has been that butter sent to the market fresh will bring most money.

Dr. CLARK.—I presume you expect to hear something from me on the chemical side of the question of butter-making. I have a few thoughts that may be of service to you. In the first place, I believe it is conceded that the details to be carried out in butter-making are what makes a perfect article, and what I shall say will be in reference to details, and more especially in regard to sanitary surroundings. If you are going to produce an article that is uniform, you must see to it that your implements and instruments that you are to use are in proper condition to fulfill all their requirements. Temperature is probably the most important condition required, and, therefore, you should know, to begin with, that you have an accurate thermometer. Now, I will tell you how you can test your thermometer, and do it very readily. Take your thermometer and put it in boiling water and observe that the mercury rises to the boiling point, 212 degrees, Fahrenheit. Then put it in melting ice, and if it goes down to the freezing point, thirty-two degrees, it is correct at that point. Now, in order to find out whether the tube is evenly drawn and correctly marked, if you will turn the tube up and let a small part of the mercury separate and run to the top, marking the degrees it covers, and

then let it flow toward the bulb slowly and observe it, and if it covers an equal number of degrees all the way down the tube, you may conclude that you have a good thermometer.

Now, another point to be observed in butter-making is cleanliness. There are two kinds of uncleanness; one of the perceptible kind, such as having a pig-sty too near the dairy-house, or leaving refuse matter near by. Then drainage is an important factor. Imperceptible uncleanness is the poison that is liable to come from foul conditions, or it may be from the atmosphere, without any apparent reason for it, in the form of germs. Professor Vaughn, of the Michigan University, has discovered a new kind of poison in milk, which he calls toritoxicon, that produces conditions like the cholera-infantum; that, he claims, is due to closing up milk too soon after it is drawn from the cow, and without driving off the animal heat. You can close it up and not do any harm, but if the germ is there, or if that germ by any means gets into the milk, and you close it up without driving off the animal heat, you favor their development, and it goes on then and matures into that state which is capable of producing this disease. Now, the way to avoid all these things is to separate this part of your farming from every other part, and cool your milk as soon as possible. Have your dairy-house so there can be no connection between that and any decomposing matter, whether vegetable or animal.

Milk will absorb the odors surrounding it quicker than anything else, unless it be butter. In the south a few years ago milk left standing over night in an open can in a malarious district, produced in the consumers, fever and ague. Investigation shows that the milk absorbed from the air the poison that produces fever and ague. Two weeks ago I bought a chicken and put it in the ice-box, over night, in which there was a small tub of butter and some milk. The next day the chicken had spoiled and commenced to decompose. I could taste in the milk and in the butter the same flavor I got from the chicken by smelling of it. This shows the necessity of using the utmost care if you want to produce a good article which will bring the best price.

Mr. MUNSON.—With the Cooley, or submerged-setting, I claim that any animal odors escaping from the milk will be taken up by the water.

Dr. CLARK.—The idea is, that by putting water around the milk this odor is absorbed by the water. By the other system it is let out into the open air; and the question is, which is the best process. I do not think it makes very much difference, providing the surroundings are perfect. In the submerged process, the water absorbs it.

Mr. MUNSON.—It is a well-settled theory among scientific men and judges of butter, that excellent butter can be made, if the surroundings are perfect, by the old fashioned pans, or by the shallow-setting as we call it. It was the theory of Prof. Arnold that cream should be thoroughly oxidized; that it should be exposed to the air, and that no perfect butter could be made without it. I think after you remove the cream it should be kept cold, in tight cans, and kept as cold as it was before, until you get enough for a churning. Then give it air, and temper it for churning, in a pure atmosphere, and in that way you can oxidize the cream and temper it better than any other. I think cream should be tempered, or ripened, at the same temperature as for churning.

Colonel CURTIS.—In our cooling-room we propose to keep our cream where the temperature will be below sixty degrees. This cream, churned to-day, was just about ripe, and was ripened in the open dairy-house; and I can show you cream there, taken from the milk Monday night and Tuesday morning, that is still sweet. I make it a point to stir the cream several times a day.

Mr. MUNSON.—It gets all the oxidation that the can will admit of; but my point is to expose more of the surface of the cream, and it will not require so much stirring.

Colonel CURTIS.—I am willing to accept any new idea, and I think your plan is a good one, and one that it would be well to adopt.

Mr. MUNSON.—I made my suggestion as to the use of these shallow pans with the idea that all dairymen have not the facilities for keeping the dairy-room at an even temperature; and they can use them in almost any place if they have water to do it with.

Mr. SHULL.—Don't you think that the larger number of the dairymen now ripen their cream in deep pails?

Mr. MUNSON.—Yes, sir; they do.

Mr. SHULL.—And if they would properly stir the cream wouldn't they oxidize it just as well as by use of these pans you speak of?

Mr. MUNSON.—It they should stir it quite frequently perhaps they would.

Colonel CURTIS.—The oxidation and aeration by which the volatile oils are developed in the cream give the butter its aroma. If the cream is churned when it is the right degree of acidity these oils are developed; and that is what gives that delicate flavor that is sought for in fine butter. There are but few of the dairies in the State that have reached that degree of perfection where the volatile oils are developed to their highest degree, and, consequently, are not making

butter that brings the highest price. This a lesson that should be taught to our farmers and dairymen.

Mr. MUNSON.—Cream should be kept at the same temperature that it was when taken from the milk, until you have enough for a churning. If you have cream from one mess of milk, partially ripened, and then mix with it another mess that is not ripened at all, and churn it together, there will be a large percentage of loss.

Mr. DOUGALD.—Suppose you have a batch of cream fit to churn at night, and another batch that is nearly fit, and you save them until morning and mix them together; will you lose anything by it?

Mr. MUNSON.—I think you will. I think you can not hasten the ripening of cream by turning a mess of ripe cream into it. It is not the acid that measures the ripeness of cream. The acid is an indication by which you can know that the time of ripening has elapsed.

Mr. SHULL.—What has been your experience in the difference methods of setting cream; and what has been the results of any experiments you have made?

Mr. MUNSON.—I have recently made tests of different modes of setting the milk.

TEST OF E. D. ABELL'S DAIRY, FRANKLIN, N. Y., JULY 3, 1888.

Dairy consists of twenty cows, of which one cow is farrow and one lost her calf in December, six grade Jerseys, and the others, grades. Food, pasture. Morning and night milk, 449 pounds. Milk set in large shallow pans surrounded by running water, and skimmed when set forty-eight hours, and cream mixed and kept in pails in milk-room at sixty degrees. Churned with the revolving barrel churn, July third; cream at sixty degrees; acidity well developed. Time of churning fifty minutes, at fifty revolutions per minute. Butter held in granules and washed in churn; then taken out, weighed, and put on the worker and salted at one ounce salt to a pound; salt being mixed in with a flat wooden spud, after which the butter was run through the worker a few times, taking 21.38 pounds milk to a pound of butter.

TEST OF D. W. MERRILL'S DAIRY, FRANKLIN, JULY 5, 1888.

Dairy of nine cows, of which one is two years old; two are grade Ayrshires, and one grade Guernsey, and the others grade Jerseys. Cows have pasture, and each one a quart of meal a day, of equal parts of corn and oats.

Four milkings taken July first and second, amounting to 409 pounds. Milk submerged in ice water, and skimmed after twenty-

four hours. Cream mixed and kept cold until all was gathered, then kept until properly ripened. Churned at sixty-five degrees. Churn used was barrel revolving. Time of churning twenty-five minutes, at sixty revolutions per minute. Butter held in granules, and washed and salted, one ounce to the pound. Taking 18.59 pounds of milk for a pound of salted and worked butter.

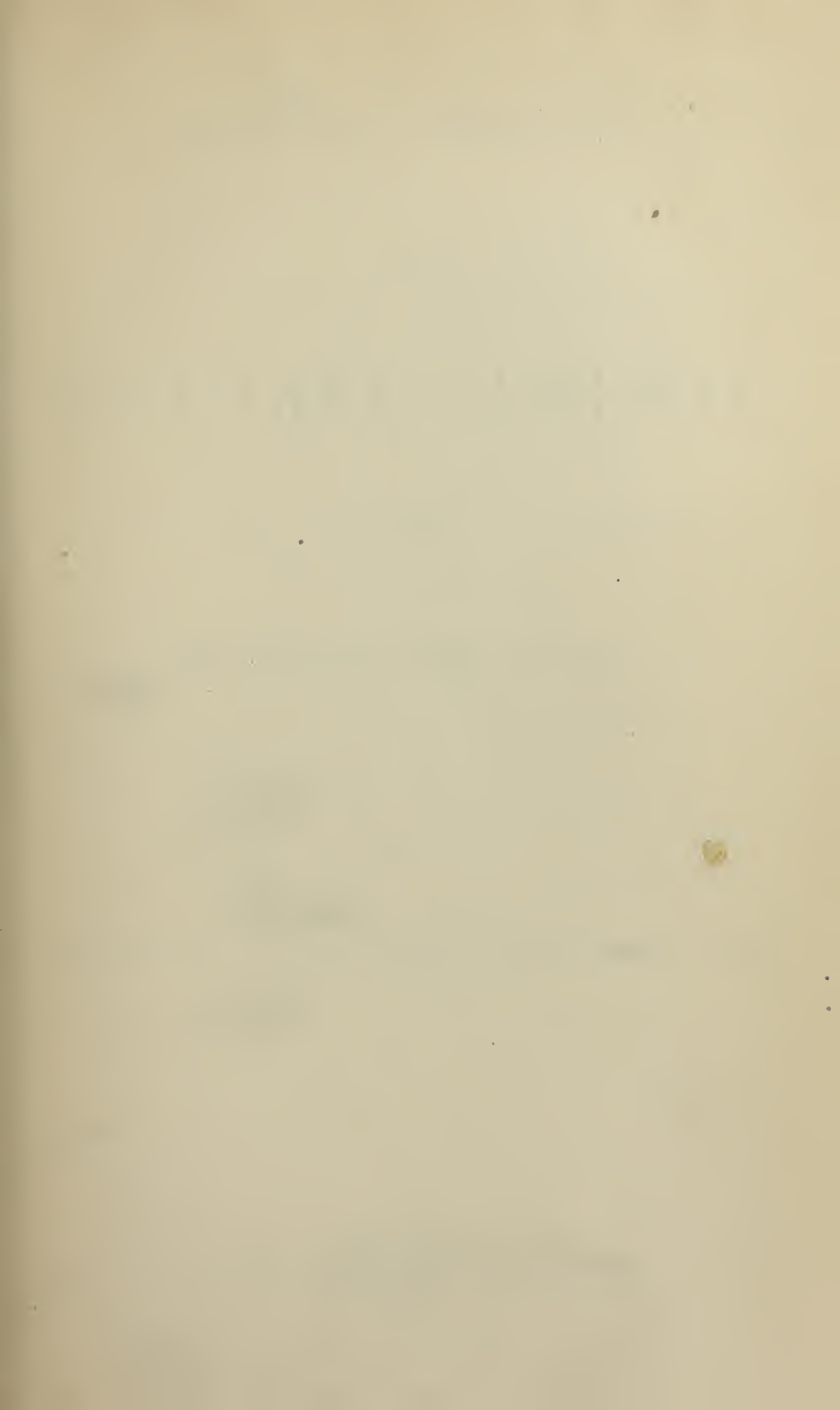
TEST OF S. F. EDWARD'S DAIRY, FRANKLIN, JULY 5, 1888.

Dairy consists of eight cows, of which two are full blood Jerseys, and the others grade Ayrshires. Pasture only. Four milkings taken, amounting to four hundred and five pounds. Milk set in small pans standing on rack in cellar, and surrounded by cold water, and skimmed before souring. Cream mixed and kept in pails in cellar until ripened for churning. Churned with dash churn, at sixty degrees. Time of churning one hour and forty minutes. Butter massed in the churn, and taken out into bowl and washed, and salted, requiring twenty-two and one-half pounds of milk for a pound of butter.

Mr. VAN VALKENBERG.—In going about the country I am frequently asked in regard to how butter is made to granulate in the churn. There may be some here that do not understand how it is done.

Mr. MUNSON.—Stop churning when the butter has come in granules about the size of a grain of wheat, draw the butter-milk, and use cold water to hold the butter in this state till the salt is mixed through the butter, after which the butter is worked.

Adjourned *sine die*.



ANNUAL REPORT

OF THE

ADJUTANT-GENERAL

OF THE

STATE OF NEW YORK.

TRANSMITTED TO THE LEGISLATURE JANUARY 1, 1889.

ALBANY:
THE TROY PRESS COMPANY, PRINTERS.
1889.

THE UNIVERSITY OF CHICAGO

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STATE OF NEW YORK.

No. 107.

IN ASSEMBLY,

JANUARY 1, 1889.

REPORT OF THE ADJUTANT-GENERAL.

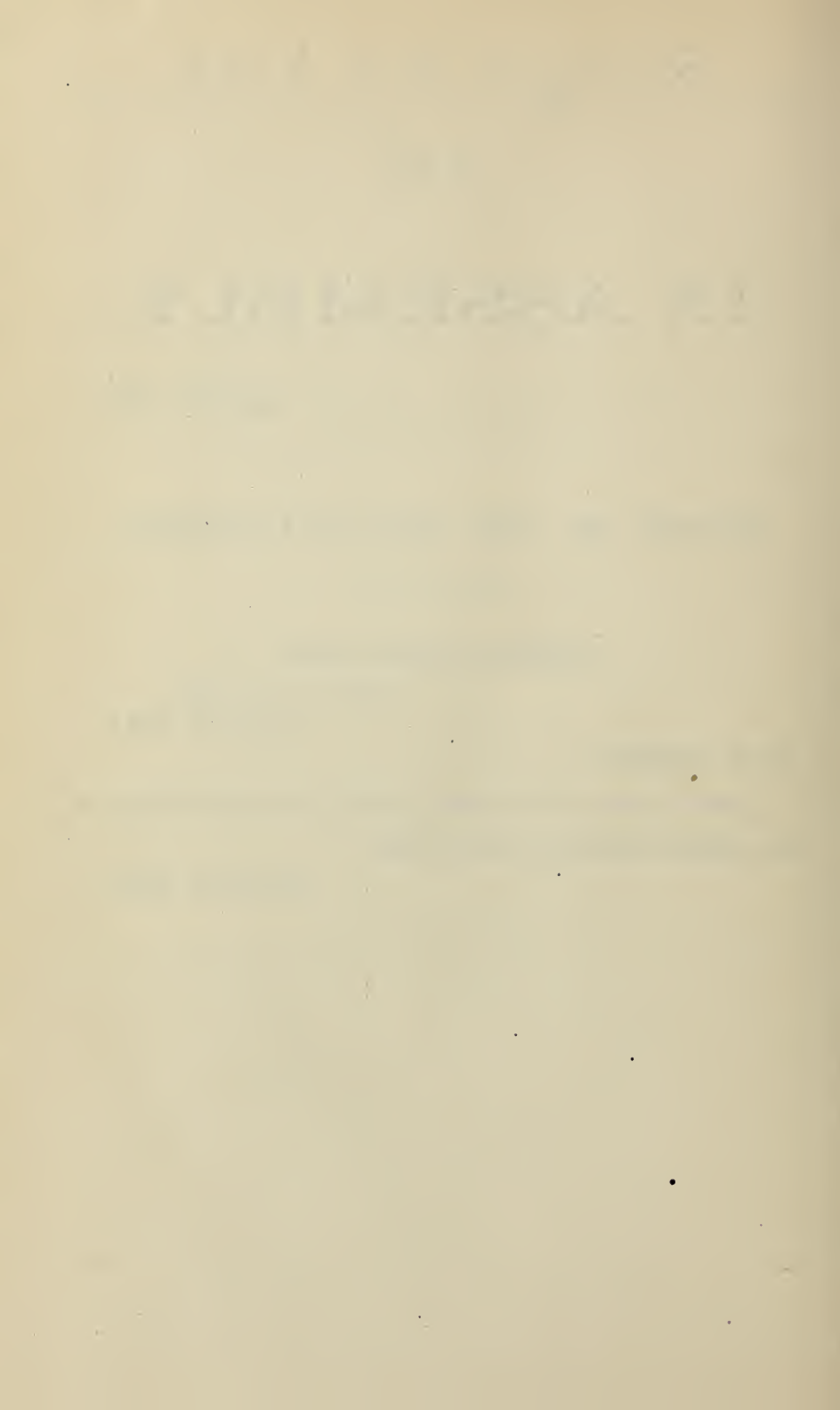
STATE OF NEW YORK:

EXECUTIVE CHAMBER, }
January 1, 1889. }

To the Legislature:

I have the honor to transmit herewith the Annual Report of the Adjutant-General for the year 1888.

DAVID B. HILL.



REPORT.

GENERAL HEADQUARTERS, STATE OF NEW YORK, }
ADJUTANT-GENERAL'S OFFICE, }
ALBANY, *December 31, 1888.* }

Hon. DAVID B. HILL,

Governor and Commander-in-Chief :

SIR.—I have the honor to submit my report for the year 1888, as follows :

According to the last quarterly returns, made September thirtieth ultimo, there were in the National Guard at that date, 770 officers, and 12,763 enlisted men, an aggregate force of 13,533 officers and men.

On the request of its commanding officer, the Twenty-fifth separate company, station Canandaigua, was mustered out December fourteenth instant.

Two separate companies have been mustered into the service, one at Cortland, January twenty-fourth, designated as the Forty-fifth and attached to the Fourth Brigade, and one at Amsterdam, September third, designated as the Forty-sixth and attached to the Third Brigade.

The force now comprises fifteen regiments, one battalion and forty-five separate companies of infantry, and five batteries of artillery, organized as four brigades, as set forth in my last annual report.

Applications for authority to raise new companies are so frequently received that it is evident that the State will have no difficulty in increasing the numbers of the force. Whenever it is determined that a larger force is advisable, provision should be first made for the organization of a certain number of batteries of heavy artillery.

The condition of the troops is satisfactory. There is still a higher standard of discipline and efficiency, which is easily within reach, and will be attained. The urgent need at the present time is a more thorough and advanced education of officers. But giving due consideration to all the criticisms and suggestions that have been made, it may be safely asserted that the several organizations will acquit themselves honorably and creditably whenever called on for service, and their qualifications for actual service and their readiness to respond when required, are the true tests by which they should be estimated.

There is little to be added to what has been said in previous reports upon the subjects of arms, uniforms and equipments. During the year, fatigue coats or blouses have been ordered for all the enlisted men, and the issue of new overcoats has begun and will be completed within two or three months. Both the blouses and overcoats are of superior quality, and have given complete satisfaction. It is again urged as an important prudential measure, that a large extra supply of equipments (including cartridge belts), overcoats and blankets, should be kept constantly in stock at the State arsenals. Arms, in case of an emergency, could probably be obtained with little delay from the United States government, but however that may be, the State can not well be advised to purchase any, until it is ascertained what caliber and what pattern will be adopted for the army.

The following table shows the armories and arsenals owned by the State, and how they are occupied :

New York.—Thirty-fifth street and Seventh avenue, office of Chief of Ordnance and military store-house.

Rochester.—Eighth Separate Company.

Utica.—Twenty-eighth and Forty-fourth Separate companies.

Buffalo.—Sixty-fifth Regiment.

Syracuse.—Fifth Battery, Fortieth and Forty-first Separate companies.

Auburn.—Second Separate Company.

Schenectady.—Thirty-sixth and Thirty-seventh Separate companies.

Oswego.—Twenty-ninth and Thirty-eighth Separate companies.

Newburgh.—Fifth and Tenth Separate companies.

Kingston.—Fourteenth Separate Company.

Watertown.—Thirty-ninth Separate Company.

Brooklyn.—Forty-seventh Regiment.

Troy.—Sixth, Twelfth and Twenty-first Separate companies.

Flushing.—Seventeenth Separate Company.

Binghamton.—Sixth Battery and Twentieth Separate Company.

Oneonta.—Third Separate Company.

Walton.—Thirty-third Separate Company.

The following are in process of erection :

Hoosick Falls.—For Thirty-second Separate Company ; appropriation \$25,000, chapter 677, Laws of 1887.

Elmira.—For Twenty-sixth and Thirtieth Separate companies ; appropriation \$25,000, chapter 455, Laws of 1885 ; and \$15,000, chapter 283, Laws of 1887, to include room for Grand Army post ; total, \$40,000.

Mt. Vernon.—For Eleventh Separate Company ; appropriation \$20,000, chapter 651, Laws of 1887 ; reappropriated by chapter 168, Laws of 1888, with \$5,000 additional ; total, \$25,000.

Catskill.—For Sixteenth Separate Company ; appropriation \$20,000, chapter 436, Laws of 1888.

The following are to be erected :

Poughkeepsie.—For the Fifteenth and Nineteenth Separate companies ; appropriation \$35,000, chapter 143, Laws of 1888.

Albany.—For Tenth Battalion ; appropriation \$80,000, chapter 165, Laws of 1887.

Saratoga.—For Twenty-second Separate Company ; appropriation \$25,000, chapter 621, Laws of 1887 ; and by chapter 284, Laws of 1888, appropriation \$5,000 for grading, filling, excavating, draining, etc., site ; total, \$30,000.

Olean.—For Forty-third Separate Company ; appropriation \$25,000, chapter 120, Laws of 1888.

Cohoes.—For Seventh Separate Company ; appropriation \$25,000, chapter 377, Laws of 1888.

Mohawk.—For Thirty-first Separate Company ; appropriation \$15,000, chapter 426, Laws of 1888.

Jamestown.—For Thirteenth Separate Company ; appropriation \$25,000, chapter 463, Laws of 1888.

Middletown.—For Twenty-fourth Separate Company ; appropriation \$25,000, chapter 531, Laws of 1888.

The character of the Camp of Instruction as a military school is now well established, and it is as such that it must be maintained in order that the benefits derived from it may be proportionate to its expense. Considered as a school, the importance of securing a corps of competent instructors is apparent. The recommendation is again made that several inspectors or instructors be appointed with suitable rank and pay. These officers could be used with great advantage to the troops as well at their armories as at the camp of instruction.

Lieutenant-Colonel R. H. Jackson, Fourth Artillery, U. S. A., was at the camp, under orders from the headquarters of the army, for observation and inspection. A copy of his report to the Adjutant-General, U. S. A., is forwarded herewith.

First Lieutenant W. R. Hamilton, Fifth Artillery, and Second Lieutenant H. H. Benham, Second Infantry, U. S. A., were also detailed to the camp, and in various ways rendered valuable assistance. Lieutenant Hamilton has since been detailed to these headquarters for such service as he may be able to perform in the interest of the State troops. He takes a warm interest in his work, and has been heartily welcomed by all those who believe in the progress and the future of the National Guard.

There were in camp this season about 5,500 men. Annexed is a table showing the organizations ordered to the camp of instruction and their attendance. This table is followed by others which give the attendance of each organization by days.

The number of officers and enlisted men paid for services in camp is 5,427; this does not show, however, the full attendance, for there were men who served in camp not more than two days and under the orders did not receive pay, nor are the detachments of the First Battery, which served in camp for seven weeks, included in this number.

The highest attendance reported makes a total of 5,422 which also does not convey the full number of men who attended camp, inasmuch as the gain of men on a report was often balanced by an equal loss of men.

The average attendance in camp this year is 82.70 per cent, the highest average since the camp has been established; in 1882, it was 76.00 per cent; in 1883, 79.53 per cent; in 1884, 80.01 per cent; in 1885, 79.05 per cent; in 1886, 81.45 per cent; in 1887, 74.27 per cent.

REPORT OF THE ADJUTANT-GENERAL.

ORGANIZATIONS IN CAMP, 1888.										CAMP OF 1888.					AVERAGE PERCENTAGE OF ATTENDANCE IN CAMP, SEASON OF—					
Aggregate strength, present and absent officers and enlisted men.										No. of officers and enlisted men paid.	Highest attendance and enlisted men.	Lowest attendance and enlisted men.	Average attendance and enlisted men.	Average percentage of attendance.	1882.	1883.	1884.	1885.	1886.	1887.
Eighth Regiment.....										403	402	397	400	81.63	78.40	.....	.....	.....	78.80	.....
Eleventh Regiment.....										496	507	500	504	82.73	63.80	.....	.....	.....	79.53	.....
Thirteenth Regiment.....										584	530	502	515	72.71	.....	70.80	.....	.....	.....	.....
Fourteenth Regiment.....										587	413	412	405	69.60	.....	.....	75.94	.....	77.71	.....
Thirty-second Regiment.....										436	338	323	318	73.54	.....	.....	84.18	.....	79.92	.....
Sixty-fifth Regiment.....										472	410	409	406	86.44	.....	90.00	.....	.....	85.16	.....
Sixty-ninth Regiment.....										966.28	727	725	709	74.39	.....	.....	.....	73.02	73.29	.....
First Separate Company.....										64	61	61	61	95.31	.....	.....	.....	94.23	96.36	.....
Second Separate Company.....										103	77	77	76	76.57	79.70	.....	.....	72.34	74.33	.....
Third Separate Company.....										94	88	89	85	91.48	.....	.....	.....	93.75	97.80	.....
Fourth Separate Company.....										79	63	63	62	62.86	.....	.....	74.85	83.24	88.24	.....
Seventh Separate Company.....										80	69	69	68	68.43	.....	.....	66.90	99.35	77.22	.....
Eighth Separate Company.....										74	60	60	60	81.08	.....	.....	99.35	98.74	98.74	.....
Tenth Separate Company.....										60	49	51	48	49.43	.....	.....	74.28	.....	87.95	.....
Twelfth Separate Company.....										89	68	68	65	66.28	74.48	.....	.....	.....	76.95	.....
Thirteenth Separate Company.....										93	84	85	83	84	90.01	.....	79.03	60.71	.....	.....
Fourteenth Separate Company.....										77	54	56	52	54	70.00	.....	81.87	80.75	.....	.....
Fifteenth Separate Company.....										67	55	55	53	54.30	81.20	.....	82.07	73.42	.....	.....
Sixteenth Separate Company.....										61	47	47	45	46	75.18	.....	71.42	73.73	.....	.....
Eighteenth Separate Company.....										58	49	49	49	49	81.04	.....	86.16	90.38	.....	.....
Nineteenth Separate Company.....										104	61	60	55	57	54.80	.....	.....	.....	.....	82.30
Twenty-first Separate Company.....										77	73	73	72	72.86	94.62	86.00	88.47	81.00	87.47	.....
Twenty-third Separate Company.....										71	65	65	63	64	90.14	.....	.....	70.31	64.08	.....
Twenty-fourth Separate Company.....										73	59	60	56	58.60	80.23	.....	.....	.....	.....	.....
Twenty-sixth Separate Company.....										92	83	82	81	81.85	88.97	.....	97.05	95.88	.....	.....
Twenty-seventh Separate Company.....										60	55	55	55	55	91.67	.....	77.61	90.82	.....	.....
Twenty-eighth Separate Company.....										85	71	72	69	70	82.35	.....	82.39	.....	.....	.....
Twenty-ninth Separate Company.....										56	53	53	52	52.71	94.14	.....	81.22	80.95	.....	.....
Thirtieth Separate Company.....										54	48	48	44	46.43	85.90	.....	.....	86.12	.....	.....
Thirty-first Separate Company.....										69	51	51	50	50.57	73.29	87.80	92.42	78.10	87.57	.....
Thirty-second Separate Company.....										81	75	75	75	75	92.59	.....	.....	84.55	98.44	.....
Thirty-third Separate Company.....										72	66	66	66	66	95.83	.....	.....	71.78	98.44	.....
Thirty-fourth Separate Company.....										65	60	60	56	58	88.80	.....	69.09	93.10	.....	.....

Thirty-sixth Separate Company	65	60	60	59	59.57	91.64	.....	.....	91.93	.....	93.33	.....
Thirty-seventh Separate Company	78	64	64	63	63.71	81.68	.....	.....	83.98	.....	70.00	.....
Thirty-ninth Separate Company	73.29	59	59	59	59	80.51	.....	.....	79.65	.....	86.32	.....
Fortieth Separate Company	62	54	54	54	54	87.09	.....	83.00	.....	.....	89.55	.....
Forty-second Separate Company	102	89	91	91	86.57	84.87	.....	.....	.....	.....	.....	.....
Forty-third Separate Company	87	74	74	71	72.43	83.25	.....	.....	.....	.....	.....	.....
Third Battery	73	62	62	60	60.71	83.16	.....	.....	75.31	.....	.....	.....
Total	6,768	5,427	5,422	5,285	5,359	82.70	.....	.....	.....	.....	.....	.....

In May last, Captain Auer's Sixth Battery, under orders from general headquarters, made a march of six days. It was believed that some work of this kind, which should include target practice, would be of great service in improving the batteries, and the experiment was entirely satisfactory. The report of the commanding officer and a report by Lieutenant Hamilton, Fifth Artillery, U. S. A., who accompanied the battery, are submitted herewith.

The Thirteenth Separate Company, Jamestown, the Twenty-third, Hudson, and the Forty-third, Olean, have been ordered out at different times in aid of the civil authorities. See reports of the commanding officers of these companies forwarded herewith.

The work performed in the Bureau of Records of the War of the Rebellion during the past year has increased rather than diminished. More than six thousand communications have been sent by the Bureau in response to applications for certificates of service, records of officers and enlisted men, names and addresses of officers of volunteers of this State, and other matters connected with the war of the rebellion; besides these a large number of requests preferred in person have been satisfied by the Bureau.

In accordance with chapter 51, Laws of 1887, and chapter 247 of same year, records of volunteers, not on file in the bureau, have been received from the Adjutant-General of the United States Army, as follows: Complete records of the First, Second, Third, Fourth, Sixth, Eighth, Ninth, Tenth, Eleventh, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Twenty-first and Twenty-fourth Cavalry, the

First Mounted Rifles and the Oneida Company of Cavalry; of the Second, Fourth, Sixth, Seventh, Eighth, Ninth, Tenth, Thirteenth, First Marine Artillery regiments, and the thirty-four batteries of artillery; the First, Fifteenth and Fiftieth Engineers; the First Battalion of Sharpshooters and the First, Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth, Eleventh, Twelfth, Seventeenth, Seventeenth Veterans, Twentieth, Twenty-first, Twenty-fifth and Twenty-sixth regiments of infantry, and the New York companies of Berdan's Sharpshooters; records of companies, to complete the record of the regiment, of the Eighteenth and First Veteran Cavalry, Fifteenth Artillery and Fiteenth, Sixteenth and 177th Infantry.

Arrangements have been made to procure the records of the Thirty-seventh, Thirty-eighth, Thirty-ninth, Fortieth, Forty-first, Forty-second, Forty-third, Forty-fifth, Fifty-first, Fifty-second, Fifty-third, Fifty-fifth, Fifty-seventh, Sixty-third, Sixty-ninth, Seventieth, Seventy-first, Seventy-second, Seventy-third, Seventy-fourth, Eighty-first, Eighty-second, Eighty-third, Eighty-fourth and Eighty-eighth regiments of infantry; leaving to be obtained yet the records of about fifty regiments and a large number of individual records of soldiers of other regiments, whose final record is not on file in the bureau. This work will soon be completed and will exhaust the appropriations made in chapters 51 and 247, Laws of 1887.

The records received from the Adjutant-General, U. S. A., are in such shape that the provisions of chapter 247, Laws of 1887, relating to records of volunteers, are also complied with. A full execution of chapter 247 of Laws of 1887 has been impossible, inasmuch as no rooms have been assigned or obtained for the use of the bureau, as contemplated in that law.

The report of Major-General J. G. Farnsworth shows that during the year the sum of \$67,702.05 has been received from

the United States and paid into the treasury of the State on account of expenses incurred by the State in raising troops for the general government during the war of the rebellion.

The following reports and appendices accompany and are made a part of this report :

- A. Register of Commissioned Officers of the National Guard.
- B. Report on State Camp by Major R. H. Jackson, Fifth United States Artillery.
- C. General Orders and Circulars, and Opinions of the Judge-Advocate-General.
- D. Report of the Inspector-General.
- E. Reports of the Chief of Ordnance.
- F. Report of the Paymaster-General.
- G. Report of Colonel Judson, Paymaster at Camp of Instruction.
- H. Report of the General Inspector of Rifle Practice.
- I. Report of the Surgeon-General.
- J. Reports of Commanding Officers of First and Fourth Brigades.
- K. Report of General J. G. Farnsworth on War Claims.
- L. Report on March of Fifth Battery, by Commanding Officer.
- M. Reports of First Lieutenant W. R. Hamilton, Fifth United States Artillery.—1. On March of the Fifth Battery. 2. On Instruction given to Officers in First and Second Brigades.
- N. Reports of Commanding Officers on duty performed by the Thirteenth, Twenty-third and Forty-third Separate Companies.
- O. Report of Commanding Officer on Service of Ninth Regiment, at Gettysburg, July 1, 2 and 3, 1888.
- P. Statement of Disbursements.

Very respectfully

Your obedient servant.

JOSIAH PORTER,

Adjutant-General.

OFFICIAL REGISTER

OF THE

NATIONAL GUARD, S. N. Y.

JANUARY 1, 1889.

Errors and omissions should immediately be reported to the Adjutant-General by the officers concerned.

Only the highest brevet rank is given, and that only when the officer has not attained the full rank.

The numbers placed after the names of general and departmental staff officers on pages 6 to 20 indicate the number of the brigade with which they are on duty.

COMMANDER-IN-CHIEF,
DAVID B. HILL, OF ELMIRA,
Governor of the State.

HEADQUARTERS AT ALBANY.

Staff of the Commander-in-Chief :

Major-General Josiah Porter, Adjutant-General.

Brigadier-General Charles F. Robbins, General Inspector of Rifle Practice.

Brigadier-General Joseph D. Bryant, Surgeon-General.

Brigadier-General George S. Field, Chief of Engineers.

Brigadier-General Joshua M. Varian, Chief of Ordnance.

Brigadier-General Emil Schaefer, Inspector-General.

Brigadier-General Ralph Brandreth, Commissary-General of Subsistence.

Brigadier-General Walter C. Stokes, Paymaster-General.

Brigadier-General Clifford A. H. Bartlett, Judge-Advocate-General.

Brigadier-General Ferdinand P. Earle, Chief of Artillery.

Colonel Edmund L. Judson 2d, Military Secretary.

Colonel Hugh O'Donoghue, Aide-de-Camp.

Colonel Albert B. Hilton, Aide-de-Camp.

Colonel George B. McClellan, Aide-de-Camp.

Colonel William F. Lansing, Aide-de-Camp.

Colonel Marcus D. Russell, Aide-de-Camp.

The National Guard, consisting of five batteries of artillery, fifteen regiments, one battalion, and forty-five separate companies of infantry, organized in four brigades.

First Brigade.

Headquarters, No. 6 Pine street, New York city.

Brigadier-General LOUIS FITZGERALD, Commanding.

Lieutenant-Colonel Robert W. Leonard, Assistant Adjutant-General.

Major Stephen H. Olin, Judge-Advocate.

Major C. Lawrence Perkins, Commissary of Subsistence.

Major Robert V. McKim, Surgeon.

Major Paul Dana, Ordnance Officer.

Major Auguste P. Montant, Inspector.

Major Wendell Goodwin, Quartermaster.

Major David Crocker, Inspector of Rifle Practice.

Captain W. Emlen Roosevelt, Aide-de-Camp.

Captain Francis R. Appleton, Aide-de-Camp.

The First and Second Batteries, the Seventh, Eighth, Ninth, Eleventh, Twelfth, Twenty-second, Sixty-ninth and Seventy-first Regiments of Infantry.

Attached to the Brigade Staff, Supernumerary Officers :

Lieutenant-Colonel Benjamin S. Church, as Engineer.

Major Edmund C. Stanton, as Signal Officer.

Second Brigade.

Headquarters, Hall of Records, Brooklyn.

Brigadier-General JAMES McLEER, Commanding.

Lieutenant-Colonel John B. Frothingham, Assistant Adjutant-General.

Major Gustave A. Jahn, Inspector.

Major George L. Fox, Inspector of Rifle Practice.

Major Frank Lyman, Engineer.

Major William Cary Sanger, Quartermaster.

Major George Kinkel, Jr., Ordnance Officer.

Major George R. Fowler, Surgeon.

Major Almet F. Jenks, Judge-Advocate.

Major Fritz Brosè, Commissary of Subsistence.

Captain Francis D. Beard, Aide-de-Camp.

Captain Edward Annan, Jr., Aide-de-Camp.

The Third Battery, the Thirteenth, Fourteenth, Twenty-third, Thirty-second and Forty-seventh Regiments, and Seventeenth Separate Company of Infantry.

Attached to the Brigade Staff, Supernumerary Officer :

Captain Frederick T. Leigh, as Signal Officer.

Third Brigade.

Headquarters, Albany.

Brigadier-General AMASA J. PARKER, Jr., Commanding.

Colonel John S. McEwan, Assistant Adjutant-General of the State, acting as Assistant Adjutant-General of the Brigade.

Major Albert Hoysradt, Judge-Advocate.

Major Elwood O. Roessle, Commissary of Subsistence.

Major Herman Bendell, Surgeon.

Major Patrick F. Bulger, Ordnance Officer.

Major Charles H. Gaus, Inspector of Rifle Practice.

Major Hobart Warren Thompson, Quartermaster.

Captain Charles J. Peabody, Aide-de-Camp.

Captain Ithamar W. Copeland, Signal Officer.

Captain Charles G. Cleminshaw, Aide-de-Camp.

The Sixth Battery, the Tenth Battalion, the Third, Fourth, Fifth, Sixth, Seventh, Ninth, Tenth, Eleventh, Twelfth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth, Twenty-first, Twenty-second, Twenty-third, Twenty-fourth, Twenty-seventh, Twenty-eighth, Thirty-first, Thirty-second, Thirty-third, Thirty-fifth, Thirty-sixth, Thirty-seventh, Thirty-ninth, Forty-fourth and Forty-sixth Separate Companies of Infantry.

Attached to the Brigade Staff, Supernumerary Officers :

Colonel David M. Greene, as Engineer.

Major Frederick B. Spriggs.

Major Edward L. Gaul.

Major Robert Lenox Banks.

Fourth Brigade.

Headquarters, 474 Main street, Buffalo.

Brigadier-General PETER C. DOYLE, Commanding.

Lieutenant-Colonel Charles Clifton, Assistant Adjutant-General.

Major Edward S. Warren, Quartermaster.

Major Edmund Hayes, Engineer.

Major Roswell Park, Surgeon.

Major Herbert P. Bissell, Judge-Advocate.

Major Alan H. G. Hardwicke, Inspector of Rifle Practice.

Major Frederick A. Jewett, Ordnance Officer.

Major Nathaniel Rochester, Inspector.

Major Edson J. Weeks, Commissary of Subsistence.

Captain Francis R. Keating, Aide-de-Camp.

Captain Charles R. Wilson, Aide-de-Camp.

The Fifth Battery, the Sixty-fifth and Seventy-fourth Regiments, and the First, Second, Eighth, Thirteenth, Twenty-sixth, Twenty-ninth, Thirtieth, Thirty-fourth, Thirty-eighth, Fortieth, Forty-first, Forty-second, Forty-third and Forty-fifth Separate Companies of Infantry.

GENERAL OFFICERS.

NAME, GRADE AND DATE OF RANK.	In the Armies of the United States.	SERVICE.	In the National Guard.	Born.
<i>Brigadier-Generals.</i> Louis Fitzgerald (1), March 28, 1882.	Sergeant, Co. C, 7th Regt., N. Y. S. militia, in U. S. service from April 19 to June 3, 1861; First Lieutenant 11th N. Y. vols., June 2, 1861; Captain, July 21, 1861; resigned September 1, 1861; Adjutant 40th N. Y. vols., Jan. 24, 1862; Captain, May 26, 1862; Provost-Marshal and Aide-de-Camp, Kearny's and Birney's 1st Division; Aide de-Camp to Major - General Foster, 18th Army Corps; discharged July 6, 1864; Major and later Lieutenant-Colonel 1st Regt. militia, district of Vicksburg, Miss., and discharged in February, 1865.	Private, Co. C, 7th Regt., Dec. 30, 1857; Corporal, Jan. 4, 1860; Sergeant, Feb. 4, 1860; vacated by entry in U. S. service, June 3, 1861; Second Lieutenant, 7th Regt., Sept. 23, 1861; First Lieutenant, Co. E, Dec. 6, 1861; vacated office by enlisting in N. Y. vols., Jan., 1862; First Lieutenant, Co. E, 7th Regt., Oct. 14, 1865; Adjutant 7th Regt., May 1, 1867; Lieutenant-Colonel, Nov. 9, 1876; Brigadier-General, March 28, 1882; Supernumerary, Aug. 5, 1886; Brigadier-General, 1st Brigade, Aug. 26, 1886, with original rank.		N. Y.
James McLeer (2), Oct. 13, 1885	Private, Co. C, 14th N. Y. S. militia (84th vols.), April 18, 1861; discharged as Sergeant (loss of left arm), July 27, 1863; Brevet Captain N. Y. S. vols.	Private, Co. C, 14th Regt., April 18, 1861; discharged as Sergeant July 27, 1863; First Lieutenant, Co. C, 14th Regt., May 27, 1865; Quartermaster, 14th Regt., Sept. 9, 1867; Major, Aug. 16, 1869; Lieutenant-Colonel, Nov. 7, 1870; Colonel, June 6, 1873; Brigadier-General, 3d Brigade, Oct. 13, 1885; Supernumerary, Aug. 5, 1886; Brigadier-General, 2d Brigade, Aug. 26, 1886, with original rank.		N. Y.

Peter C. Doyle (4), Jan. 16, 1886.	Quartermaster-Sergeant, 21st N. Y. vols., May 20, 1861; Second Lieutenant, Oct. 1, 1861; First Lieutenant, May 6, 1862; Captain, Sept. 9, 1862; honorably discharged May 18, 1863; Brevet Major, N. Y. vols.	Private, Co. B, 74th Regt., Nov. 12, 1856; Aide-de-Camp, 31st Brigade, April 4, 1865; Assistant Adjutant-General, May 1, 1867; resigned Feb. 26, 1868; Engineer, 14th Brigade, June 11, 1878; resigned April 24, 1880; Colonel and Assistant Commissary-General of Subsistence, July 21, 1883; Brigadier-General, 8th Brigade, Jan. 16, 1886; Supernumerary, Aug. 5, 1886; Brigadier-General, 4th Brigade, Aug. 30, 1886, with original rank.	N. Y.
Amasa J. Parker, Jr. (3), Aug. 25, 1886	.....	Aide-de-Camp, 3d Division, Sept. 1, 1866; Supernumerary, May 4, 1867; Lieutenant-Colonel, 10th Regt., June 15, 1875; Colonel, July 23, 1877; resigned March 1, 1880; Brigadier-General, 3d Brigade, Aug. 25, 1886.	N. Y.

ADJUTANT-GENERAL'S DEPARTMENT.

<i>Adjutant-General—Major-General.</i> Josiah Porter, Jan. 1, 1886.	First Lieutenant, 1st Mass. Battery, April, 1861 (Battery A, Mass. vol. artillery); Captain, July, 1861; honorably discharged Sept. 27, 1862.	Private, Boston Cadets; First Lieutenant, Boston City Guard; Adjutant, Ancient and Honorable Artillery, Boston, Mass.; Captain, 22d Regt., N. G. S. N. Y., June 13, 1865; Major, May 10, 1867; Lieutenant-Colonel, Jan. 30, 1869; Colonel, Oct. 11, 1869; Major-General and Adjutant-General, Jan. 1, 1886. Reappointed Jan. 1, 1889.	Mass.
<i>Assistant Adjutant-General—Colonel.</i> John S. McEwan, Jan. 1, 1880.	First Lieutenant, 113th N. Y. vols., Aug. 8, 1862; Captain, 7th N. Y. vol. art., late 113th vols. Jan. 16, 1864; resigned June 1, 1866; Brevet Colonel, N. Y. vols.; Second Lieutenant, 4th U. S. artillery, Aug. 17, 1867; resigned December 15, 1872; Brevet Captain, U. S. Army.	Private, Co. A, 10th Regt., 1861; Major, 10th Regt., July 23, 1877; Lieutenant-Colonel, Aug. 27, 1879; Colonel and Assistant Adjutant-General, Jan. 1, 1880.	Scot.

ADJUTANT-GENERAL'S DEPARTMENT—(Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Acting Assistant Adjutant-General—Colonel.</i> Frederick Phisterer, Jan. 1, 1880.....	Private, Co. A, 3d U. S. artillery, Dec. 6, 1855; Corporal, Oct. 12, 1858; Sergeant, July 10, 1860; honorably discharged Dec. 6, 1860; Sergeant-Major, 18th U. S. infantry, July 31, 1861; Second Lieutenant, Oct. 30, 1861; First Lieutenant, Feb. 27, 1862; Captain, Feb. 15, 1866; transferred to 36th U. S. infantry July 28, 1866; transferred to 7th U. S. infantry March 3, 1866; honorably discharged Aug. 4, 1870. Private, 5th Mass. vol. militia, three months service, May to July, 1861.	Captain, Governor's Guard, O. N. G., Aug. 27, 1877; resigned Jan. 27, 1879; Colonel and Acting Assistant Adjutant-General, S. N. Y., Jan. 1, 1880.	Ger.
<i>Assistant Adjutants-General of Brigade—Lieutenant-Colonels.</i> John B. Frothingham (2), April 11, 1881; Brevet Colonel, June 22, 1883.	Private, 23d Regt., Dec. 3, 1860; Corporal, March 4, 1870; Sergeant, Jan. 3, 1872; Adjutant, April 6, 1874; Major, Jan. 10, 1880; Lieutenant-Colonel, April 11, 1881, and Adjutant-General, 3d Brigade, March 31, 1886, with original rank; Supernumerary, Aug. 5, 1886; Assistant Adjutant-General, 2d Brigade, with original rank. First Lieutenant and Aide-de-Camp, 14th Brigade, April 16, 1881; Captain and Quartermaster, July 19, 1881; Major and Quartermaster, 8th Brigade, April 23, 1883; Lieutenant-Colonel and Assistant Adjutant-General, April 22, 1884; Supernumerary, Aug. 5, 1886; Assistant Adjutant-General, 4th Brigade, with original rank, Sept. 7, 1886; Supernumerary, and assigned to duty with 4th Brigade, Nov. 8, 1886; Assistant Adjutant-General, 4th Brigade, Nov. 2, 1888, with original rank.		Mass.
Charles Clifton, April 22, 1884.....			N. Y.

Robert W. Leonard (1), Oct. 6, 1887 . . .	Private, Co. B, 7th militia, April 19 to June 3, 1861, and May 26 to Sept. 5, 1862; Adjutant, 162d N. Y. vols., Sept. 15, 1862; Major, June 14, 1863; resigned Feb. 5, 1864; Brevet Lieutenant-Colonel, U. S. vols.	Private, Co. B, 7th Regt., May 7, 1860 to Sept. 11, 1862; Adjutant, 4th Regt., Nov. 17, 1865; Major, April 18, 1867; Brevet Lieutenant-Colonel, Dec. 10, 1867; Commissary of Subsistence, 7th Regt., Feb. 1, 1868; Major and Inspector, Cavalry Brigade, Jan. 2, 1869; Lieutenant-Colonel and Assistant Adjutant-General, Cavalry Brigade, Jan. 26, 1870; Supernumerary by disbandment, Dec. 2, 1870; Captain, 27th Regt., Aug. 9, 1875; Supernumerary by disbandment, Nov. 22, 1878; Lieutenant-Colonel and Assistant Adjutant-General, 1st Brigade, Oct. 6, 1887.	Ills.
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INSPECTOR-GENERAL'S DEPARTMENT.

<i>Inspector-General—Brigadier-General.</i> Emil Schaefer, Jan. 1, 1886	Corporal, 13th Regt., N. G., S. N. Y., three months' service in 1862; Sergeant, 13th Regt., N. G., S. N. Y., thirty days' service, 1863.	Private, 7th Regt., Oct. 20, 1880; Corporal, May 4, 1883; Sergeant, Aug. 7, 1885; Brigadier-General and Inspector-General, Jan. 1, 1886. Reappointed Jan. 1, 1889.	N. Y.
<i>Assistant Inspectors-General—Colonel.</i> Thomas H. McGrath, Feb. 7, 1884		Private, 13th Regt., Nov. 22, 1861; Corporal, May 28, 1862; Sergeant, June 20, 1863; First Sergeant, June 8, 1864; Second Lieutenant, Oct. 11, 1865; First Lieutenant, Feb. 4, 1868; Captain, Sept. 25, 1873; honorably discharged Feb. 19, 1874; Major and Assistant in Inspector-General's Department, June 24, 1875; Lieutenant-Colonel June 9, 1879; resigned March 1, 1880; Lieutenant-Colonel and Assistant in Inspector-General's Department, Jan. 1, 1883; Assistant Inspector-General, Feb. 7, 1884.	N. Y.

INSPECTOR-GENERAL'S DEPARTMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Inspectors of Brigades—Major.</i> Gustave A. Jahn (2), April 23, 1883....	Corporal, Co. K, 13th Regt., N. G., S. N. Y., June 20 to July 20, 1863.	Private, Co. K, 13th Regt., June 4, 1863; Corporal, June 20, 1863; First Lieutenant and Commissary of Subsistence, Aug. 8, 1877; Captain and Com- missary of Subsistence, 3d Brigade, July 22, 1880; Major and Commissary of Subsistence, April 23, 1883; Supernumerary, Aug. 5, 1886; Commissary of Subsistence, 2d Brigade, original rank, Oct. 5, 1886; Major and Inspector, original rank, July 23, 1887.	Ger.
Auguste P. Montant (1), May 14, 1884.	.....	Private, Co. K, 7th Regt., Sept. 5, 1879; Major and Quartermaster, 2d Brigade, May 14, 1884; Super- numery, Aug. 5, 1886; Inspector, 1st Brigade, Oct. 3, 1886, with original rank.	Fr.
Nathaniel Rochester (4), April 26, 1887	.....	Captain and Aide-de-Camp, 8th Brigade, Sept. 4, 1877; First Lieutenant, Separate Troop L, Nov. 13, 1878; Captain, Co. E, 65th Regt., April 8, 1880; Major, 65th Regt., April 28, 1881; Lieutenant- Colonel, Feb. 22, 1882; resigned Oct. 25, 1883; Major and Inspector, 4th Brigade, April 26, 1887.	N. Y.

JUDGE ADVOCATE-GENERAL'S DEPARTMENT.

<i>Judge Advocate-General—Brigadier-General.</i> Clifford A. H. Bartlett, May 12, 1888.	Private, Co. C, 7th Regt., Oct. 4, 1871; Corporal; Colonel and Aide-de-Camp on Staff of Com- mander-in-Chief, Jan. 1, 1875; commission expired Dec. 31, 1879; Adjutant, 9th Regt., June 25, 1883; Major, Feb. 5, 1884; Brigadier-General and Judge Advocate-General, May 12, 1888. Reappointed Jan. 1, 1889.	Mass.
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<i>Judge-Advocates of Brigade—Majors.</i> Stephen H. Olin (1), April 24, 1882.....	Major and Judge-Advocate, 2d Brigade, April 24, 1882; Supernumerary, Aug. 5, 1886; Judge-Advocate, 1st Brigade, Oct. 3, 1886, with original rank.	Conn.
Albert Hoysradt (3), Jan. 31, 1883.....	Major and Judge-Advocate, 5th Brigade, Jan. 31, 1883; Supernumerary, Aug. 5, 1886; Judge-Advocate, 3d Brigade, Oct. 13, 1886, with original rank.	N. Y.
Herbert P. Bissell (4), Aug. 25, 1885.....	Major and Judge-Advocate, 8th Brigade, Aug. 25, 1885; Supernumerary, Aug. 5, 1886; Judge-Advocate, 4th Brigade, Sept. 7, 1886, with original rank.	N. Y.
Almet F. Jenks (2), Oct. 4, 1886.....	Major and Judge-Advocate, 2d Brigade, Oct. 4, 1886	N. Y.

QUARTERMASTER'S DEPARTMENT.

<i>Quartermaster-General—Brigadier-General.</i> .....	.....	.....
<i>Assistant Quartermaster-General—Colonel.</i> Henry Frost Clark, Jan. 26, 1886.....	Private, Co. A, 21st Regt., Oct. 27, 1862; Second Lieutenant, May 10, 1864; Captain, May 30, 1867; honorably discharged Nov. 25, 1869; Quartermaster, 21st Regt., Jan. 20, 1870; Adjutant, July 20, 1872; Lieutenant-Colonel, April 26, 1876; honorably discharged Nov. 18, 1878; Inspector of Rifle Practice, 5th Brigade, Jan. 31, 1883; resigned May 3, 1884; Colonel and Assistant Quartermaster-General, Jan. 26, 1886.	N. Y.
<i>Quartermasters of Brigade—Majors.</i> Edward S. Warren (4), April 22, 1884.....	First Lieutenant and Aide-de-Camp, Nov. 10, 1879; Captain and Aide-de-Camp, 14th Brigade, Dec. 2, 1880; Major and Quartermaster, April 22, 1884; Supernumerary, Aug. 5, 1886; Quartermaster, 4th Brigade, Sept. 7, 1886, with original rank.	N. Y.

QUARTERMASTER'S DEPARTMENT—(Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
Wendel Goodwin (1), Feb. 28, 1885.....	Private, Independent Corps Cadets, Boston, Mass., 1872; Provost-Sergeant, 2d Brigade, Mass. Vol. Militia, 1876; Provost-Marshal and Captain, April 16, 1881; resigned March 3, 1882; Inspector and Major, 2d Brigade, N. G., S. N. Y., May 22, 1882; resigned Nov. 13, 1883; Major and Commissary of Subsistence, 2d Brigade, Feb. 28, 1885; Supernumerary, Aug. 5, 1886; Quartermaster, 1st Brigade, Oct. 3, 1886, with original rank. Major and Quartermaster, 2d Brigade, Jan. 4, 1886.	N. H.
Wm. Cary Sanger (2), Jan. 4, 1886.....	N. Y.
Hobert Warren Thompson (3), Dec. 20, 1888.....	Private, 6th Separate Company, Jan. 17, 1884; Captain and Aide-de-Camp, 3d Brigade, Sept. 8, 1886; Major and Quartermaster, 3d Brigade, Dec. 20, 1888.	N. Y.

SUBSISTENCE DEPARTMENT.

<i>Commissary-General of Subsistence—</i> <i>Brigadier-General.</i>	.....	Brigadier-General and Commissary-General of Subsistence, Jan. 1, 1886. Reappointed Jan. 1, 1889.	N. Y.
Ralph Brandreth, Jan. 1, 1886. . . . .	.....	.....	.....
<i>Captain and Assistant in Subsistence</i> <i>Department.</i>	.....	.....	.....
Joseph P. Jardine, May 25, 1887.....	Private, 22d Regt., N. G., S. N. Y., May 28 to Sept. 5, 1862, and June 18 to July 24, 1863.	Private, Co. G, 22d Regt., Sept. 17, 1861; Corporal, Dec. 28, 1866; Commissary of Subsistence, 22d Regt., April 10, 1877; Captain and Assistant in Subsistence Department, May 25, 1887.	Eng.

<i>Commissaries of Subsistence of Brigades— Majors.</i>		
C. Lawrence Perkins (1), May 22, 1882	Major and Engineer, 2d Brigade, May 22, 1882; Supernumerary, Aug. 5, 1886; Commissary of Subsistence, 1st Brigade, Oct. 3, 1886, with original rank.	Eng.
Elwood O. Roessle (3), Sept. 8, 1886	Major and Commissary of Subsistence, 3d Brigade, Sept. 8, 1886.	N. Y.
Fritz Brosé (2), July 5, 1887	Private, Co. D, 23d Regt., Jan. 5, 1880; Corporal, Feb. 20, 1882; Captain and Aide-de-Camp, 3d Brigade, Jan. 26, 1885; Supernumerary, Aug. 5, 1886; appointed Aide-de-Camp, 2d Brigade, with original rank, Dec. 24, 1886; Major and Commissary of Subsistence, 2d Brigade, July 5, 1887.	N. Y.
Edson J. Weeks (4), Oct. 18, 1887	Major and Commissary of Subsistence, 4th Brigade, Oct. 18, 1887.	N. Y.

MEDICAL DEPARTMENT.

<i>Surgeon-General—Brigadier-General.</i> Joseph D. Bryant, Jan. 1, 1883.....	Major and Surgeon, 71st Regt., July 22, 1873; Surgeon-General, Jan. 1, 1883. Reappointed Jan. 1, 1889.	N. Y.
<i>Assistant Surgeon-General—Colonel.</i> William Freese Duncan, Aug. 23, 1888.....	Assistant-Surgeon, 22d Regt., May 9, 1878; Captain and Surgeon, April 22, 1880; Major and Surgeon, April 23, 1883; Colonel and Assistant Surgeon-General, S. N. Y., August 23, 1888.	N. J.
<i>Assistant in the Department—First Lieutenant.</i> Albert L. Behan, Feb. 21, 1885.....	First Lieutenant and Assistant Surgeon, Med. Dept., Feb. 21, 1885.	N. Y.
<i>Surgeons of Brigades—Majors.</i> Robert V. McKim (1), March 5, 1883.. 1862; honorably discharged Dec. 3, 1862.....	Major and Surgeon, 2d Brigade, March 5, 1883; Supernumerary, Aug. 5, 1886; Surgeon, 1st Brigade, Oct. 3, 1886, with original rank.	N. Y.
Roswell Park (4), May 6, 1884.....	Major and Surgeon, 8th Brigade, May 6, 1884; Supernumerary, Aug. 5, 1886; Surgeon, 4th Brigade, Sept. 7, 1886, with original rank.	Conn.

MEDICAL DEPARTMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
George R. Fowler (2), June 2, 1886.	.....	Captain and Assistant Surgeon, 14th Regt., June 4, 1877; Major and Surgeon, 14th Regt., June 2, 1886; Surgeon, 2d Brigade, Oct. 5, 1886, with rank from June 2, 1886.	.....
Herman Bendell (3), Sept. 8, 1886.	Assistant Surgeon, 6th N. Y. vol. Artillery, Feb. 23, 1863; Surgeon, 86th N. Y. vols., Dec. 26, 1864; resigned May 25, 1865; Brevet Colonel N. Y. vols.	Major and Surgeon, 3d Brigade, Sept. 8, 1886.	N. Y.

PAY DEPARTMENT.

<i>Paymaster-General — Brigadier-General.</i> Walter C. Stokes, Jan. 16, 1888.	.....	Paymaster-General, S. N. Y., Jan. 16, 1888. Reappointed Jan. 1, 1889.	N. Y.
<i>Assistant Paymaster-General—Colonel.</i> Edward B. Ten Broeck, March 21, 1885	.....	Private, Co. A, 10th Regt., May 9, 1870; Corporal, Jan. 8, 1872; Sergeant, Dec. 2, 1872; Second Lieutenant, Feb. 16, 1874; First Lieutenant, Oct. 18, 1875; discharged Feb. 26, 1879; Colonel and Assistant Paymaster-General, March 21, 1885.	N. Y.

ENGINEER DEPARTMENT.

<i>Engineer-in-Chief—Brigadier-General.</i> George S. Field, Jan. 1, 1883.	.....	Brigadier-General and Engineer-in-Chief, Jan. 1, 1883. Reappointed Jan. 1, 1889.	N. Y.
<i>Engineers of Brigades—Majors.</i> Edmund Hayes (4), April 22, 1884.	.....	Major and Engineer, 8th Brigade, April 22, 1884; Supernumerary, Aug. 5, 1886; Engineer, 4th Brigade, Sept. 7, 1886, with original rank.	Me.

Frank Lyman (2), Jan. 4, 1886 Major and Engineer, 3d Brigade, Jan. 4, 1886; Supernumerary, Aug. 5, 1886; Engineer, 2d Brigade, Oct. 5, 1886, with original rank. N. Y.

ORDNANCE DEPARTMENT.

Chief of Ordnance (Commissary-General)
—*Brigadier-General.*
Joshua M. Varian, Jan. 1, 1886. N. Y.

Private, Co. C, 8th Regt., Dec. 15, 1861; Captain and Engineer, 8th Regt., Aug. 14, 1863; Captain and Paymaster, 3d Brigade, Dec. 22, 1866; Captain and Aide-de-Camp, 3d Brigade, May 16, 1867; discharged Oct. 9, 1869; Aide-de-Camp, 3d Brigade, Feb. 7, 1870; Major and Inspector, May 16, 1877; discharged March 26, 1880; Colonel and Assistant Chief of Ordnance, March 8, 1882; Brigadier-General and Chief of Ordnance, Jan. 1, 1886. Reappointed Jan. 1, 1889.

Assistant Chief of Ordnance—Colonel.

Assistant in Ordnance Department—Colonel.

Joseph G. Story, Jan. 20, 1880. First Sergeant, Co. A, 23d Regt., N. Y. G., S. N. Y., June 18, 1863, to July 22, 1863. N. Y.

Private, Co. A, 23d Regt., Jan. 20, 1862; Corporal, Jan. 27, 1862; Sergeant, Aug. 28, 1862; First Sergeant, Nov. 6, 1863; Second Lieutenant, Sept. 7, 1866; First Lieutenant, March 1, 1867; Captain, Jan. 13, 1875; Colonel and Assistant Inspector-General of Rifle Practice, Jan. 20, 1880; Colonel and Assistant in Ordnance Department, Jan. 1, 1883; reappointed Aug. 18, 1887, with original rank, Jan. 20, 1880.

Ordnance Officers of Brigades—Majors.
Paul Dana (1), May 7, 1883. N. Y.

Major and Ordnance Officer, 2d Brigade, May 7, 1883; Supernumerary, Aug. 5, 1886; Ordnance Officer, 1st Brigade, Oct. 3, 1886, with original rank.

ORDNANCE DEPARTMENT — (*Continued*).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
George Kinkle, Jr. (2), May 17, 1886.	Private, Co. H, 13th Regt., July 26, 1878; Quartermaster-Sergeant, March 26, 1879; Second Lieutenant, June 8, 1880; First Lieutenant, Sept. 3, 1880; resigned Oct. 8, 1880; Major and Ordnance Officer, 4th Brigade, May 17, 1886; Supernumerary, Aug. 5, 1886; Ordnance Officer, 2d Brigade, Nov. 5, 1886, with original rank.	N. Y.
Patrick F. Bulger (3), Sept. 8, 1886.
Frederick A. Jewett (4), March 15, 1887	First Lieutenant and Aide-de-Camp, 14th Brigade, Sept. 6, 1881; Captain and Aide-de-Camp, 8th Brigade, April 23, 1883; Supernumerary, Aug. 5, 1886; Aide-de-Camp, 4th Brigade, Sept. 7, 1886, with original rank; Major and Ordnance Officer, March 15, 1887.	N. Y.
CHIEF OF ARTILLERY.			
<i>Brigadier-General.</i> Ferdinand P. Earle, Jan. 1, 1889.	Private, Co. B., 7th Regt., Oct., 23, 1862; honorably discharged Oct. 29, 1869; Captain, 2d Battery, April 5, 1881; Brigadier-General and Chief of Artillery, Jan. 1, 1889.	Conn.
<i>Assistant Chief of Artillery—Colonel.</i> Frank S. Collins, March 29, 1886	Cadet and Midshipman, Naval Academy, graduated June, 1875; served two years as full Midshipman in U. S. Navy.	Major and Aide-de-Camp, 1st Division, Oct. 22, 1864; Colonel and Assistant Chief of Artillery, March 29, 1886.	N. Y.

DEPARTMENT OF RIFLE PRACTICE.

*General Inspector of Rifle Practice—
Brigadier-General.*

Charles F. Robbins, Jan. 1, 1883

With 7th N. G. in U. S. service
three months in 1862, thirty days in
1863.

N. Y.

*Assistant General Inspector of Rifle
Practice—Colonel.*

John Bodine, Jan. 1, 1883

N. Y.

Private, Co. C, 7th Regt., Aug. 1861; Corporal in
1862; Sergeant in 1863; First Sergeant in 1865;
Second Lieutenant, Dec. 13, 1867; First Lieutenant,
Feb. 17, 1871; Captain and Inspector of Rifle
Practice, May 15, 1875; honorably discharged
Nov. 25, 1881; General Inspector of Rifle Practice,
Jan. 1, 1883. Reappointed Jan. 1, 1889.
Private, 96th Militia, 1844; First Lieutenant, 1844;
Captain, 1845; Lieutenant-Colonel, 1845; dis-
charged by reorganization of militia, 1847; Cap-
tain of Military District, 1847; honorably dis-
charged, 1847; Major and Inspector of Rifle Prac-
tice, 8th Brigade, Jan. 19, 1875; Lieutenant-
Colonel and Inspector of Rifle Practice, 5th
Division, July 12, 1875; Supernumerary, Dec. 17,
1881; Colonel and Assistant General Inspector of
Rifle Practice, Jan. 1, 1883.*Assistants in Department—Colonel.*

Pascal P. Beals, Jan. 8, 1884

N. Y.

Captain and Aide-de-Camp, 8th Division, Oct. 9,
1879; Major and Inspector of Rifle Practice, 14th
Brigade, Oct. 10, 1879; Lieutenant-Colonel and
Inspector of Rifle Practice, 8th Division, May 3,
1881; Colonel and Assistant in Department of
Rifle Practice, Jan. 8, 1884.*Inspectors of Rifle Practice of Brigades—
Majors.*Alan H. G. Hardwicke (4), June 3,
1884

Eng.

Private, Co. G, 23d Regt., Oct. 6, 1876; dropped
Aug. 6, 1877; Major and Aide-de-Camp, 4th
Division, June 3, 1884; Major and Ordnance
Officer, 8th Brigade, June 3, 1886; Supernumerary,
Aug. 5, 1886; Ordnance Officer, 4th Brigade, Sept.
7, 1886, with original rank; Inspector of Rifle
Practice, April 6, 1887, with original rank.

DEPARTMENT OF RIFLE PRACTICE — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
George L. Fox (2), Jan. 19, 1885.....	.....	Private, 23d Regt., July 3, 1878; Corporal, Feb. 4, 1880; Second Lieutenant, Co. F, June 13, 1882; Inspector, Dec. 8, 1884; Major and Inspector of Rifle Practice, 4th Brigade, Jan. 19, 1885; Supernumerary, Aug. 5, 1886; Inspector Rifle Practice, 2d Brigade, Oct. 5, 1886, with original rank.	N. Y.
Charles H. Gaus (3), Sept. 10, 1886....	Private, 91st N. Y. vols., Aug. 31, 1864; discharged May 10, 1865.	Private, Co. H, 10th Regt., Oct. 30, 1880; discharged by disbandment, March 7, 1881; Private, Co. D, 10th Battalion, May 29, 1882; discharged March 1, 1883; Private, Co. D, 10th Battalion, June 1, 1883; First Lieutenant and Inspector of Rifle Practice, Oct. 23, 1883; Major and Inspector of Rifle Practice, 3d Brigade, Sept. 10, 1886.	Ohio.
David Crocker (1), April 18, 1888.....	.....	Served nine years in the 7th Regt., N. G., S. N. Y., as Private; Major and Inspector of Rifle Practice, 1st Brigade, April 18, 1888.	Mass.
SIGNAL OFFICER.			
<i>Captain.</i> Ithamar W. Copeland (3), March 26, 1888.....	Private, 44th Mass. vols., Aug. 29, 1862; discharged Jan. 14, 1863.	Captain and Signal Officer, 3d Brigade, March 26, 1888.	Mass.
MILITARY SECRETARY.			
Edmund L. Judson, 2d, Jan. 1, 1886....	.....	Private, Co. A, 10th Battalion, May 18, 1885; Corporal, Oct. 5, 1885; Colonel and Aide-de-Camp, Jan. 1, 1886; Colonel and Military Secretary, with original rank, Jan. 1, 1889.	N. Y.

AIDES-DE-CAMP.

<i>To the Commander-in-Chief—Colonels.</i>			
Hugh O'Donoghue, Jan. 1, 1886.....	Colonel and Aide-de-Camp, Jan. 1, 1886. Reap- pointed Jan. 1, 1889.	N. Y.	
Albert B. Hilton, Jan. 1, 1886.....	Colonel and Aide-de-Camp, Jan. 1, 1886. Reap- pointed Jan. 1, 1889.	N. Y.	
George B. McClellan, Jan. 1, 1889.....	First Lieutenant, Co. E, 8th Regt., Dec. 1, 1885; Colonel and Aide-de-Camp, Jan. 1, 1889.	Ger.	
William F. Lansing, Jan. 1, 1889.....	Colonel and Aide-de-Camp, Jan. 1, 1889.....	N. Y.	
Marcus D. Russell, Jan. 1, 1889.....	Private, 6th Separate Company, Aug. 12, 1884; Colonel and Aide-de-Camp, Jan. 1, 1889.	N. Y.	
<i>Aides-de-Camp to Brigade Commanders— Captains.</i>			
W. Emlen Roosevelt (1), April 23, 1883.....	Captain and Assistant Quartermaster, 2d Brigade, April 24, 1882; Captain and Aide-de-Camp, April 23, 1883; Supernumerary, Aug. 5, 1886; Aide-de- Camp, 1st Brigade, Sept. 7, 1886, with original rank. Private, Co. F, 74th Regt., Sept. 5, 1884; on duty with Signal Corps from Oct. 21, 1884; Corporal, Jan. 25, 1885; Captain and Aide-de-Camp, 8th Brigade, Feb. 9, 1886; Supernumerary, Aug. 5, 1886; Aide-de-Camp, 4th Brigade, Sept. 7, 1886, with original rank.	N. Y.	
Francis Root Keating (4), Feb. 9, 1886.....	Captain and Aide-de-Camp, 4th Brigade, May 24, 1886; Supernumerary, Aug. 5, 1886; appointed Aide-de-Camp, 2d Brigade, with original rank, Dec. 24, 1886.	N. Y.	
Francis D. Beard (2), May 24, 1886.....	Captain and Aide-de-Camp, 2d Brigade, May 26, 1882; Major and Inspector of Rifle Practice, April 23, 1883; Supernumerary, Aug. 5, 1886; Aide-de- Camp, 1st Brigade, Aug. 30, 1886.	N. Y.	
Francis R. Appleton (1), Aug. 30, 1886.....	Private, Co. A, 23d Regt., April 2, 1878; dropped Feb. 9, 1880; Private, Co. A, 10th Regt., Oct. 5, 1880; Corporal, Oct. 22, 1881; Sergeant, Jan. 9, 1883; discharged Dec. 18, 1883; Captain and Aide-de-Camp, 3d Brigade, Sept. 8, 1886.	Ga.	

AIDES-DE-CAMP — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
Charles R. Wilson (4), March 15, 1887.	Private, Signal Corps, 8th Brigade, Feb. 4, 1886; disbanded Aug. 5, 1886; Captain and Aide-de-Camp, 4th Brigade, March 15, 1887.	Mass.
Edward Annan, Jr. (2), May 28, 1888.
Charles G. Clemminshaw (3), Dec. 21, 1888	Private in 6th Separate Company, five years and three months; Captain and Aide-de-Camp, 3d Brigade, Dec. 21, 1888.	N. Y.

ARTILLERY.

FIRST BATTERY.

Armory at 334-340 West Forty-fourth street, New York City.
(Attached to the First Brigade.)

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Louis Wendel, Dec. 15, 1882	First Lieutenant, Battery K (now 1st Battery), Sept. 27, 1881; Captain, Dec. 15, 1882.	Ger.
<i>First Lieutenant.</i> John T. Griffith, June 21, 1887	Private, 1st Battery, April 25, 1883; Veterinary Sergeant, July 1, 1883; Second Lieutenant, March 25, 1884; First Lieutenant, June 21, 1887.	N. Y.
Charles Nagel, Nov. 15, 1887	Private, Co. D, 11th Regt., July 4, 1866; Sergeant, Sept. 18, 1871; Second Lieutenant, June 1, 1872; honorably discharged May 28, 1874; Private, 1st Battery, Jan. 26, 1883; Second Lieutenant, April 5, 1883; First Lieutenant, Nov. 15, 1887.	Ger.
<i>Second Lieutenant.</i> Adam Boecher, Dec. 30, 1887	Private, Battery B, 1st Division, March 12, 1878; Second Lieutenant, March 8, 1880; disbanded Dec. 17, 1881; Second Lieutenant, 1st Battery, Dec. 30, 1887.	Ger.
<i>First Lieutenant and Assistant Surgeon.</i> Eugene Zachary Brievogelle, Aug. 12, 1886	First Lieutenant and Assistant Surgeon, 1st Battery, Aug. 12, 1886.	Pa.

SECOND BATTERY.

Armory, Broadway, corner of West Forty-fifth street, New York City.
(Attached to the First Brigade.)

Captain.

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ARTILLERY — SECOND BATTERY — (Continued.)

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant.</i> David Wilson, Nov. 28, 1884	Private, 2d Battery, Sept. 1, 1869; Corporal, Jan. 2, 1870; Sergeant, June 12, 1871; Quartermaster Sergeant, Nov. 9, 1874; First Sergeant, April 21, 1875; Second Lieutenant, May 17, 1883; First Lieutenant, Nov. 28, 1884.	Ire.
<i>Second Lieutenants.</i> George E. Pasco, Jan. 27, 1885	Private, 2d Battery, Oct. 26, 1875; Quartermaster Sergeant, March 10, 1879; Second Lieutenant, Jan. 27, 1885.	N. Y.
Oscar L. Rogers, Sept. 29, 1887	Private, 2d Battery, May 5, 1887; Second Lieutenant, Sept. 29, 1887.	La.
<i>First Lieutenant and Assistant Surgeon.</i> Michael T. Carroll, Sept. 30, 1887	Assistant Surgeon, 2d Battery, Sept. 30, 1887.	N. Y.
THIRD BATTERY.			
<i>Armory, 759-765 Dean street, Brooklyn.</i> (Attached to the Second Brigade.)			
<i>Captain.</i> Henry Sebastian Rasquin, May 22, 1882	Private, Gatling Gun Battery, 11th Brigade, April 13, 1877; Sergeant, Sept. 29, 1879; First Lieutenant, June 20, 1881; Captain, May 22, 1882.	Ger.
<i>First Lieutenant.</i>
<i>Second Lieutenants.</i> Samuel Duncan Bell, July 1, 1884	Private, Co. C, 22d Regt., March 21, 1877; Corporal, May 19, 1881; Sergeant, July 5, 1882; honorably discharged Dec. 14, 1883; Private, 3d Battery, Dec. 31, 1883; Second Lieutenant, July 1, 1884.	Ire.

Walter F. Barnes, Sept. 26, 1887.....	Private, 47th Regt., Oct. 2, 1879; honorably discharged May 25, 1887; Second Lieutenant, 3d Battery, Sept. 26, 1887.	N. J.
<i>First Lieutenant and Assistant Surgeon.</i> Crawford D. Beasley, Jan. 3, 1887.....	Private, Co. A, 23d Regt., June 2, 1886; First Lieutenant and Assistant Surgeon, 3d Battery, Jan. 3, 1887.	N. Y.

FIFTH BATTERY.

Armory at Syracuse.

(Attached to the Fourth Brigade.)

<i>Captain.</i> Michael Auer (Cavalry), April 6, 1870. with rank as Captain in Artillery, Sept. 2, 1881; Brevet Major, Feb. 29, 1876.	Private, Co. B, 12th N. Y. vols., May 13, 1861; First Sergeant, May 13, 1861; Second Lieutenant, Feb. 22, 1862; First Lieutenant, Oct. 27, 1862; honorably discharged May 17, 1863; Captain, 15th N. Y. vol. Cav- alry, July 24, 1863; Major, Aug. 30, 1864; honorably discharged March 6, 1865.	Swit.
<i>First Lieutenants.</i> Edwin J. Luff, Jan. 31, 1882.....	Private, 26th N. Y. vol. Battery, Oct. 4, 1862; Corporal and Sergeant; honorably discharged Sept. 12, 1865.	Eng.
Almeron D. Hayes, May 29, 1883....	Private, Co. H, 157th N. Y. vols., Aug. 18, 1862; Corporal; honorably discharged Aug. 2, 1865.	N. Y.
<i>Second Lieutenants.</i> William H. Gadow, June 20, 1883....	Private, Dec. 4, 1877, Separate Troop C, 6th Divi- sion; Corporal, Feb. 9, 1881; Sergeant, 5th Battery, April 11, 1882; First Sergeant, Dec. 16, 1882; Second Lieutenant, June 20, 1883.	Ger.
John N. Bates, March 25, 1885.....	Private, 5th Battery, March 19, 1879; Quartermaster- Sergeant, Aug. 29, 1882; First Sergeant, July 24, 1883; Second Lieutenant, March 25, 1885.	N. Y.

ARTILLERY — FIFTH BATTERY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Attached to Battery, Supernumerary Officer as Assistant Surgeon—Major and Surgeon.</i>			
Gregory Doyle, June 1, 1872. . . . .	.....	Surgeon, 51st Regt., June 1, 1872; Supernumerary, Dec. 17, 1881; assigned to duty with Battery, May 10, 1883.	Ire.
SIXTH BATTERY.			
<i>Armory on Dickinson street, Binghamton.</i>			
(Attached to the Third Brigade.)			
<i>Captain.</i>			
Laurel L. Olmsted, Nov. 13, 1874.	Third Assistant Engineer, U. S. Navy, Nov. 24, 1860; discharged July, 1863.	Private, 6th Battery, March 20, 1870; First Lieutenant, March 30, 1870; Captain, Nov. 13, 1874.	N. Y.
<i>First Lieutenant.</i>			
John N. Underwood, Aug. 22, 1881.	Private, Co. G, 2d N. Y. vol. Art., Aug. 4, 1862; Sergeant; honorably discharged May, 1865.	Private, 6th Battery, Jan. 1, 1872; Sergeant, July 5, 1875; First Sergeant, Sept. 27, 1877; Second Lieutenant, Aug. 15, 1878; First Lieutenant, Aug. 22, 1881.	Conn.
<i>Second Lieutenant.</i>			
John H. Gross, June 10, 1881.	Private, 6th N. Y. vol. Cavalry, Nov. 5, 1861; Corporal; discharged Aug. 9, 1865.	Private, 6th Battery, March 19, 1880; Sergeant, June 7, 1881; Second Lieutenant, June 10, 1881.	N. Y.

INFANTRY.

SEVENTH REGIMENT—(Ten Companies.)

First Brigade.

Armory, Fourth avenue and Sixty-seventh street, New York City.

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Colonel.</i> Emmons Clark, June 21, 1864.....	Captain, Co. B, 7th Regt., N. Y. S. Militia, from April 19 to June 3, 1861; from May 26 to Sept. 5, 1862; from June 17 to July 21, 1863.	Private, Co. B, 7th Regt., Jan. 22, 1857; First Sergeant, April 5, 1858; Second Lieutenant, Sept. 20, 1859; First Lieutenant, June 14, 1860; Captain, Dec. 26, 1860; Colonel, 7th Regt., June 21, 1864.	N. Y.
<i>Lieutenant-Colonel.</i> George Moore Smith, March 5, 1881.....	Private, Co. B, 7th Regt., N. Y. S. Militia, from May 2 to June 3, 1861; as First Sergeant and Second Lieutenant, from May 26, to Sept. 5, 1862; as Second Lieutenant from June 17 to July 21, 1863.	Private, Co. B, 7th Regt., April 20, 1861; First Sergeant, Sept. 13, 1861; Second Lieutenant, June 5, 1862; First Lieutenant, June 30, 1864; Captain, Co. G, Dec. 31, 1864; Major, 7th Regt., April 8, 1870; Lieutenant-Colonel, March 5, 1881.	Me.
<i>Major.</i> William H. Kipp, May 10, 1886	As Private, Co. D, 7th Regt., N. Y. S. Militia, April 19, to June 3, 1861; Corporal and Sergeant, from May 26 to Sept. 5, 1862; and Second Lieutenant, from June 17 to July 21, 1863.	Private, Co. D, 7th Regt., Oct. 21, 1857; Corporal, May 29, 1862; Sergeant, July 4, 1862; Second Lieutenant, Oct. 16, 1862; First Lieutenant, Dec. 30, 1863; Adjutant, 7th Regt., June 30, 1866; Captain, Co. D, 7th Regt., Oct. 8, 1866; Major, May 10, 1886.	N. Y.
<i>Adjutant—First Lieutenant.</i> George W. Rand, Nov. 16, 1882	Private, Co. F, 7th Regt., Nov. 30, 1869; Corporal, Nov. 14, 1871; Sergeant, Oct. 4, 1872; First Sergeant, Nov. 7, 1873; Second Lieutenant; Sept. 4, 1874; First Lieutenant, May 23, 1876; Adjutant, Nov. 16, 1882.	N. H.

INFANTRY — SEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Quartermaster—First Lieutenant.</i> John F. Long, June 2, 1884.....	Private, Co. F, 7th Regt., Oct. 13, 1868; Left General Guide, Dec. 5, 1881; Regimental Quartermaster Sergeant, Nov. 17, 1882; Quartermaster, June 2, 1884.	N. Y.
<i>Commissary of Subsistence—First Lieutenant.</i> Walter G. Schuyler, July 31, 1885.....	Private, Co. B, 7th Regt., Sept. 4, 1871; Corporal, April, 3, 1876; Company Quartermaster Sergeant, Oct. 7, 1878; Commissary of Subsistence, July 31, 1885.	N. Y.
<i>Surgeon—Major.</i> Daniel M. Stimson, April 23, 1883.....	Major and Surgeon, 10th Regt., N. G. S. N. Y., Oct. 1, 1868; honorably discharged July 26, 1871; Captain and Surgeon, 7th Regt., Nov. 15, 1878; Major and Surgeon, April 23, 1883.	N. Y.
<i>Assistant Surgeon—Captain.</i> William A. Valentine, June 1, 1887.....	Private, Co. F, 7th Regt., June 3, 1880; Captain and Assistant Surgeon, 7th Regt., June 1, 1887.	N. Y.
<i>Chaplain.</i> John R. Paxton, Nov. 16, 1887.....	Private, Co. G, 140th Pa. Vols., Aug. 14, 1862; Sergeant, May 15, 1863; First Sergeant, July 4, 1863; Second Lieutenant, Dec. 16, 1864; First Lieutenant, April 20, 1865; Captain, May 16, 1865; mustered out May 31, 1865. Acting Assistant Paymaster, U. S. Navy, Oct. 15, 1864; honorably discharged Oct. 15, 1865.	Chaplain, 7th Regt., Nov. 16, 1887.....	Pa.
<i>Inspector of Rifle Practice—Captain.</i> William H. Palmer, May 1, 1883.....	Private, Co. F, 7th Regt., Nov. 9, 1875; Quartermaster Sergeant, 7th Regt., Jan. 5, 1879; Second Lieutenant, Feb. 3, 1879; First Lieutenant, Dec. 15, 1882; Captain and Inspector of Rifle Practice, May 1, 1883.	Mass.

Captains.

Don Alonzo Pollard, April 5, 1866.	C	As Private, Co. C, 7th Regt., N. Y. S. Militia, from April 19 to June 3, 1861; First Sergeant, same company, from May 26 to Sept. 5, 1862; and June 17 to July 21, 1863.	Private, Co. C, 7th Regt., May 2, 1860; Corporal, Aug. 7, 1861; First Sergeant, Dec. 28, 1861; Second Lieutenant, Dec. 30, 1863; First Lieutenant, Aug. 29, 1864; Captain, April 5, 1866.	N. Y.
James C. Abrams, Sept. 29, 1875.	G	As Private in Co. H, 7th Regt., N. Y. S. Militia, from April 19 to June 3, 1861; and from June 17 to July 21, 1863.	Private, Co. H, 7th Regt., Oct. 8, 1860; Corporal, Jan. 9, 1865; Sergeant, Oct. 9, 1865; First Sergeant, April 8, 1867; Second Lieutenant, Aug. 10, 1868; First Lieutenant, Jan. 9, 1873; Captain, Co. G, Sept. 29, 1875.	N. Y.
Daniel Appleton, Jan. 13, 1879.	F	.....	Private, Co. F, 7th Regt., Oct. 31, 1871; Corporal, April 8, 1873; Sergeant, Nov. 7, 1873; First Sergeant, March 9, 1875; Second Lieutenant, May 25, 1876; Captain, Jan. 13, 1879.	N. Y.
George B. Rhoads, Oct. 25, 1880.	E	.....	Private, Co. E, 7th Regt., Sept. 7, 1866; Corporal, Jan. 19, 1866; Sergeant, July 7, 1871; First Sergeant, Oct. 5, 1877; Second Lieutenant, May 20, 1879; Captain, Oct. 25, 1880.	N. Y.
Augustus W. Conover, March 31, 1882.	A	.....	Private, Co. B, 7th Regt., March 3, 1870; Corporal, Dec. 19, 1872; Sergeant, May 3, 1875; First Lieutenant, June 3, 1878; Adjutant, 7th Regt., May 24, 1881; Captain, Co. A, March 31, 1882.	N. Y.
Louis E. Lefferts, Dec. 3, 1884.	K	.....	Private, Co. K, 7th Regt., Oct. 6, 1875; Corporal, Oct. 11, 1878; First Sergeant, Jan. 19, 1881; Second Lieutenant, Dec. 8, 1882; Captain, Dec. 3, 1884.	N. Y.
James Thorn Harper, Jan. 13, 1887.	I	.....	Private, Co. I, 7th Regt., Nov. 6, 1876; Corporal, April 7, 1879; Sergeant, Nov. 9, 1880; Second Lieutenant, Feb. 7, 1882; First Lieutenant, Jan. 10, 1884; Captain, Jan. 13, 1887.	N. Y.
Austin E. Allen, Nov. 20, 1888.	D	.....	Private, Co. D, 7th Regt., Oct. 25, 1861; Corporal, April 6, 1883; Sergeant, Sept. 28, 1883; Second Lieutenant, March 27, 1885; First Lieutenant, March 14, 1886; Captain, Nov. 20, 1888.	N. J.

INFANTRY — SEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued.)</i>				
Charles E. Lydecker, Nov. 21, 1888 ..	H	.....	Private, Co. H, 7th Regt., April 13, 1874; Corporal, Feb. 14, 1881; First Sergeant, Sept. 11, 1882; Second Lieutenant, Oct. 24, 1884; Captain, Nov. 21, 1888.	N. Y.
Daniel A. Nesbitt, Nov. 22, 1888	B	.....	Private, Co. B, 7th Regt., Nov. 4, 1867; Sergeant, Feb. 5, 1877; First Sergeant, April 2, 1883; First Lieutenant, Nov. 18, 1886; Captain, Nov. 22, 1888.	N. Y.
<i>First Lieutenants.</i>				
John W. McDougall, May 17, 1882 ...	C	.....	Private, Co. I, 71st Regt., Feb. 8, 1865; discharged Feb. 19, 1872; Private, Co. C, 7th Regt., April 5, 1872; Corporal, Oct. 4, 1872; Sergeant, Jan. 2, 1874; First Sergeant, Feb. 14, 1877; First Lieutenant, May 17, 1882.	N. Y.
Willard C. Fisk, May 29, 1882.....	A	.....	Private, Co. G, 7th Regt., March 24, 1874; transferred to Co. A, Nov. 25, 1876; Sergeant, March 31, 1879; Second Lieutenant, April 13, 1881; First Lieutenant, May 29, 1882.	N. Y.
Walter S. Wilson, Jan. 8, 1886.....	E	Private, Co. A, 21st N. Y. National Guard, thirty days in June and July, 1863.	Private, Co. B, 7th Regt., March 5, 1868; Corporal, June 3, 1872; Sergeant, Jan. 7, 1878; First Lieutenant, Co. E, Jan. 8, 1886.	N. Y.
Horace C. Du Val, Feb. 10, 1887	I	.....	Private, Co. I, 7th Regt., Oct. 27, 1870; Corporal, Feb. 6, 1872; Sergeant, Jan. 2, 1883; First Sergeant, Jan. 4, 1887; First Lieutenant, Feb. 10, 1887.	N. Y.
James B. Dewson, May 7, 1887	G	.....	Private, Co. G, 7th Regt., April 8, 1870; Corporal, Sept. 22, 1871; Second Lieutenant, Oct. 15, 1872; First Lieutenant, May 7, 1887.	Mass.
Stephen W. Merritt, Dec. 3, 1888.....	B	.....	Private, Co. B, 7th Regt., July 1, 1880; Corporal, April 10, 1883; Sergeant, Oct. 17, 1884; Second Lieutenant, May 26, 1887; First Lieutenant, Dec. 3, 1888.	N. Y.

Thomas A. Patteson, Jr., Dec. 3, 1888.	D	Private, Co. D, 7th Regt., June 30, 1881; Corporal, June 22, 1883; Sergeant, Oct. 31, 1884; First Sergeant, Sept. 14, 1886; First Lieutenant, Dec. 3, 1888.	N. Y.
Wallace F. Peck, Dec. 4, 1888	F	Private, Co. F, 7th Regt., Oct. 19, 1880; Sergeant, Dec. 15, 1882; Second Lieutenant, April 26, 1887; First Lieutenant, Dec. 4, 1888.	N. Y.
John B. Holland, Dec. 4, 1888.	H	Private, Co. H, 7th Regt., Nov. 13, 1865; Corporal, Aug. 14, 1871; Sergeant, Dec. 13, 1875; First Sergeant, Feb. 15, 1879; First Lieutenant, Dec. 4, 1888.	N. Y.
Eugene T. Kirkland, Dec. 5, 1888.	K	Private, Co. K, 7th Regt., Nov. 7, 1879; Corporal, Jan. 26, 1881; Sergeant, Oct. 26, 1881; First Sergeant, Dec. 20, 1882; Second Lieutenant, Dec. 3, 1884; First Lieutenant, Dec. 5, 1888.	N. Y.
James J. McKenna, June 28, 1886	A	Private, Co. A, 7th Regt., March 27, 1874; Corporal, June 26, 1876; discharged July 2, 1881; reenlisted Oct. 6, 1882; Corporal, Oct. 30, 1882; First Sergeant, Feb. 16, 1883; Second Lieutenant, June 28, 1886.	N. Y.
Franklin Bouker, July 30, 1886.	D	Private, 4th Regt., N. G., S. N. J., Sept. 6, 1871; discharged Feb. 13, 1877; Private, Co. D, 7th Regt., Oct. 1, 1880; Corporal, April 10, 1883; Sergeant, June 22, 1883; Second Lieutenant, July 30, 1886.	N. J.
George H. Gould, March 1, 1887	I	Private, Co. I, 7th Regt., Nov. 6, 1876; Corporal, Feb. 7, 1882; Sergeant, Feb. 5, 1884; Second Lieutenant, March 1, 1887.	N. Y.
John McGreevey, May 25, 1887	G	Private, Co. G, 7th Regt., Nov. 13, 1868; Corporal, April 18, 1870; Sergeant, June 21, 1872; First Sergeant, May 25, 1874; discharged Jan. 19, 1881; reenlisted March 28, 1881; First Sergeant, April 8, 1881; honorably discharged May 12, 1882; Second Lieutenant, Co. G, May 25, 1887.	.....
Addison McDougall, Sept. 19, 1888.	C	Private, Co. C, 7th Regt., Nov. 6, 1878; dropped Oct. 9, 1882; taken up Oct. 4, 1883; Corporal, March 7, 1884; Sergeant, Jan. 2, 1885; First Sergeant, Jan. 27, 1886; Second Lieutenant, Sept. 19, 1888.	N. Y.
Harry E. Zittel, Oct. 16, 1888	E	Private, Co. E, 7th Regt., April 8, 1881; Corporal, June 1, 1883; First Sergeant, May 15, 1885; Second Lieutenant, Oct. 16, 1888.	N. Y.

INFANTRY — SEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenants—(Continued).</i> William J. Underwood, Dec. 4, 1883.	H	.....	Private, Co. H, 7th Regt., Nov. 2, 1877; Corporal, May 14, 1883; Sergeant, June 13, 1887; Second Lieutenant, Dec. 4, 1888.	N. Y.
Morton B. Stelle, Dec. 11, 1888.	F	.....	Private, Co. F, 7th Regt., July 1, 1880; Corporal, June 7, 1883; Sergeant, March 2, 1886; First Sergeant, April 26, 1887; Second Lieutenant, Dec. 11, 1888.	D. C.
Robert McLean, Dec. 12, 1888.	K	.....	Private, Co. K, 7th Regt., Dec. 13, 1880; Corporal, Oct. 15, 1883; Sergeant, Dec. 17, 1884; First Sergeant, Dec. 2, 1886; Second Lieutenant, Dec. 12, 1888.	Eng.
Harry M. Nesbitt, Dec. 13, 1888.	B	.....	Private, Co. B, 7th Regt., March 1, 1875; Corporal, Oct. 6, 1878; Sergeant, April 2, 1883; First Sergeant, Dec. 6, 1886; Second Lieutenant, Dec. 13, 1888.	N. Y.

EIGHTH REGIMENT — (Eight Companies).

First Brigade.

Armory, *Thirty-sixth street and Broadway, New York City.*

<i>Colonel.</i> George D. Scott, Oct. 8, 1869	As Sergeant, Co. F, 8th N. Y. S. Militia, April 25 to Aug. 2, 1861; as Second and First Lieutenant, May 29 to Sept. 9, 1862; as First Lieutenant, June 29, 1863, to July 23, 1863.	Private, Co. F, 8th Regt., July 27, 1856; Corporal, 1860; Sergeant, Jan. 10, 1862; First Sergeant, Feb. 27, 1862; First Lieutenant, Sept. 24, 1862; Captain, Dec. 30, 1864; Lieutenant-Colonel, 8th Regt., Dec. 27, 1866; Colonel, Oct. 8, 1869.	N. Y.
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<i>Lieutenant-Colonel.</i> Francis A. Schilling, Dec. 14, 1870. Brevet Colonel, Dec. 16, 1879. First Lieutenant, 55th N. Y. Vols., rank from Aug. 29, 1861; honorably discharged Dec. 23, 1862; as Adjutant, 55th Regt. National Guard, from June 21, 1863, to July 22, 1863.	Private, 20th Regt. Militia, Oct., 1851; left district in July, 1853; Private, 55th Regt. Militia, May 27, 1859; Corporal, March 1, 1860; Sergeant, Feb., 1861; First Lieutenant, Aug. 29, 1861; vacated office by entry in volunteer service; First Lieutenant and Adjutant, 55th N. G., S. N. Y., June 21, 1863; Captain, Sept. 2, 1864; Major, July 7, 1869; Lieutenant-Colonel, Dec. 14, 1870; Lieutenant-Colonel, 8th Inf., Dec. 15, 1875, with original rank. First Lieutenant, Co. G, 8th Regt., March 1, 1883; Captain, Co. H, July 12, 1883; Major, Sept. 6, 1886.	Fr.
<i>Major.</i> Henry Chauncey, Jr., Sept. 6, 1886. <i>Adjutant—First Lieutenant.</i> George L. Wentworth, Sept. 29, 1888.	.....	Private, Co. A, 8th Regt., Oct. 20, 1865; Sergeant in 1866; Hospital Steward, 8th Regt., Dec. 4, 1869; Quartermaster-Sergeant, April 8, 1870; Sergeant-Major, May 9, 1873; Quartermaster and First Lieutenant, May 11, 1880; First Lieutenant and Adjutant, Sept. 29, 1888.	R. I. N. Y.
<i>Quartermaster—First Lieutenant.</i> Henry G. Ridabock, Oct. 17, 1888. <i>Commissary of Subsistence—First Lieutenant.</i> Philip Milligan, Jan. 20, 1881.	.....	First Lieutenant and Quartermaster, 8th Regt., Oct. 17, 1888.	.....
<i>Surgeon—Major.</i> Charles E. Bruce, April 23, 1883. <i>Assistant Surgeon—Captain.</i> Samuel Hemmingway, May 21, 1884.	.....	Private, 8th Regt., March 13, 1871; Commissary of Subsistence, Jan. 20, 1881. Assistant Surgeon and First Lieutenant, April 28, 1879; Captain and Surgeon, Aug. 15, 1881; Major and Surgeon, April 23, 1883. First Lieutenant and Assistant Surgeon, Aug. 15, 1881; Captain, and Assistant Surgeon, May 21, 1884.	Ire. N. Y. N. J.
<i>Chaplain—Captain.</i> Wesley R. Davis, April 23, 1879. <i>Inspector of Rifle Practice—Captain.</i> Edward Barker, May 3, 1875; Brevet Major, Dec. 16, 1879.	.....	Chaplain, 8th Regt., April 23, 1879.	Md.
..... As Sergeant, Co. F, 8th Regt., from April 25 to Aug. 2, 1861; as First Sergeant, from June 29 to July 23, 1863.	As Sergeant, Co. F, 8th Regt., Jan. 10, 1862; First Sergeant, Dec. 30, 1862; First Lieutenant, Jan. 21, 1867; Captain, Oct. 11, 1869; discharged April 7, 1874; Captain and Inspector of Rifle Practice, May 3, 1875.	Private, Co. F, 8th Regt., Dec. 28, 1857; Sergeant, Jan. 10, 1862; First Sergeant, Dec. 30, 1862; First Lieutenant, Jan. 21, 1867; Captain, Oct. 11, 1869; discharged April 7, 1874; Captain and Inspector of Rifle Practice, May 3, 1875.	Eng.

INFANTRY — EIGHTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains.</i>				
Andrew A. Oates, April 13, 1885	G	.....	Private, Co. G, 8th Regt., Nov. 11, 1874; Sergeant, Aug. 7, 1878; First Sergeant, July 14, 1880; First Lieutenant, Nov. 19, 1883; Captain, April 13, 1885.	.....
E. Austin Oothout, May 5, 1885	E	.....	Second Lieutenant, Co. H, 8th Regt., Oct. 27, 1884; Captain, Co. E, May 5, 1885.	.....
William H. Dewar, Feb. 3, 1886	I	.....	Private, Co. H, 8th Regt., May 8, 1876; Sergeant, March 31, 1884; First Lieutenant, Oct. 27, 1884; Captain, Co. I, Feb. 3, 1886.	N. Y.
Thomas M. Young, March 15, 1886	B	.....	Private, Co. B, 8th Regt., Jan. 21, 1875; Corporal, May 4, 1876; Sergeant, May 6, 1880; First Sergeant, June 26, 1882; Second Lieutenant, Feb. 16, 1883; First Lieutenant, Dec. 6, 1883; Captain, March 15, 1886.	Penn.
Alexander T. Mason, Nov. 11, 1886 ..	C	.....	Second Lieutenant, Co. H, 8th Regt., May 30, 1886; Captain, Co. C, Nov. 11, 1886.	R. I.
Haughwout Howe, March 5, 1887	D	.....	First Lieutenant, Co. D, 8th Regt., Nov. 30, 1886; Captain, March 5, 1887.	N. Y.
W. De Lancey Cunningham, Nov. 16, 1887	H	.....	Second Lieutenant, Co. I, 8th Regt., May 14, 1886; First Lieutenant, Nov. 17, 1886; Captain, Co. H, Nov. 16, 1887.	N. Y.
Knight Neftel, Dec. 22, 1887	F	.....	Second Lieutenant, Co. E, 8th Regt., Oct. 26, 1886; Captain, Co. F, Dec. 22, 1887.	N. Y.
<i>First Lieutenants.</i>				
Henry L. Cammann, Nov. 11, 1886	C	.....	First Lieutenant, Co. C, 8th Regt., Nov. 11, 1886.	Ire.
Geo. C. Heilner, June 20, 1887	D	.....	Second Lieutenant, Co. D, 8th Regt., Feb. 5, 1887; First Lieutenant, June 20, 1887.	Pa.

George H. DeVine, Dec. 22, 1887.....	I	Private, Co. D, 71st Regt., Jan. 9, 1884; Corporal, April 2, 1885; Quartermaster-Sergeant, Feb. 4, 1886; First Lieutenant, Co. I, 8th Regt., Dec. 22, 1887.	N. Y.
Edward A. Barker, Jan. 5, 1888.....	B	Private, Co. B, 22d Regt., April 17, 1882; First Lieutenant, Co. B, 8th Regt., Jan. 5, 1888.	N. Y.
Louis Hepp, Jan. 25, 1888.....	H	Private, Co. H, 8th Regt., June 3, 1885; Corporal, Sept. 28, 1885; Sergeant, Jan. 23, 1887; First Sergeant, Oct. 3, 1887; First Lieutenant, Jan. 25, 1888.	N. Y.
Robert A. McKim, March 26, 1888....	F	First Lieutenant, Co. F, 8th Regt., March 26, 1888.	R. I.
Joseph L. Myers, April 25, 1888.....	G	Private, Co. B, 22d Regt., June 8, 1885; First Lieutenant, Co. G, 8th Regt., April 25, 1888.	N. Y.
<i>Second Lieutenants.</i>			
Ike Freeman, Nov. 11, 1886.....	C	In 4th Regt., Texas N. G., 1883; Second Lieutenant, Co. C, 8th Regt., Nov. 11, 1886.	N. Y.
George P. Camman, March 5, 1887....	I	Private, Co. B, 22d Regt., Feb. 1, 1887; Second Lieutenant, Co. B, 8th Regt., Jan. 5, 1888.	N. Y.
John T. Slingerland, Jan. 5, 1888....	B	Private, Co. K, 7th Regt., Oct. 17, 1881; honorably discharged March 6, 1887; Second Lieutenant, Co. E, 8th Regt., March 6, 1888.	N. Y.
Frederick E. Gibert, March 6, 1888....	E	Private, Co. K, 12th Regt., Dec. 5, 188—; Second Lieutenant, Co. G, 8th Regt., April 25, 1888.	Ire.
Samuel J. Sayle, April 25, 1888.....	G	Second Lieutenant, Co. F, 8th Regt., April 30, 1888.	N. Y.
Oliver Harriman, Jr., April 30, 1888..	F		

NINTH REGIMENT — (Ten Companies).

First Brigade.

Armory, 221 West Twenty-sixth street, New York City.

Colonel

William Seward, Jr., April 17, 1882.....	Corporal, Co. E, 7th Regt., N. Y., service in 1861, from April 19 to June 3; Sergeant, and First Lieutenant in 1862, from May 25 to Sept. 5; and in 1863, First Lieutenant, from June 16 to July 20.	N. Y.
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INFANTRY — NINTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Lieutenant-Colonel.</i>				
Thomas B. Rand, Feb. 5, 1884.....	Captain, Co. C, 33d Mass. Vols., July 21, 1862; honorably discharged June 29, 1865.	Sergeant, Co. B, 2d Battalion, Mass. Vol. Militia (Boston Light Infantry), April 10, 1859; discharged Sept., 1860; Major, 9th Regt., N. G., S. N. Y., June 1, 1882; Lieutenant-Colonel, Feb. 5, 1884.	N. H.
<i>Major.</i>				
.....
<i>Adjutant—First Lieutenant.</i>				
Yellott D. Dechert, April 28, 1884.....	Private, Co. I, 7th Regt., May 8, 1883; Adjutant, 9th Regt., April 28, 1884.	N. Y.
<i>Quartermaster—First Lieutenant.</i>				
Dana B. Pratt, Nov. 19, 1886.....	Private, Co. K, 9th Regt., Feb. 5, 1883; Sergeant, Sept. 15, 1884; Left General Guide, May 8, 1885; Quartermaster-Sergeant, 9th Regt., Dec. 18, 1885; First Lieutenant and Quartermaster, Nov. 19, 1886.	Mass.
<i>Commissary of Subsistence—First Lieutenant.</i>				
Geo. A. Clement, June 5, 1888.....
<i>Surgeon—Major.</i>				
Alvah H. Doty, March 8, 1888.....	First Lieutenant and Assistant Surgeon, Oct. 4, 1880; Captain and Assistant Surgeon, May 21, 1884; Major and Surgeon, March 8, 1888.	N. Y.
<i>Assistant Surgeon—Captain.</i>				
Chas. Newton Thompson, April 27, '88.	Private, Portsmouth Heavy Artillery Company, May 18, 1876, and served two and one-half years; Captain and Assistant Surgeon, 9th Regt., April 27, 1888.	N. H.
<i>Chaplain.</i>				
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<i>Inspector of Rifle Practice—Captain.</i> Kasson C. Gibson, Sept. 6, 1886.....	Private, Co. I, 71st Regt., April 22, 1872; transferred to Co. F, Oct. 15, 1873; transferred to Co. F, 7th Regt., Dec. 1, 1875; discharged Feb. 17, 1881; First Lieutenant and Quartermaster, 9th Regt., Jan. 11, 1886; Captain and Inspector of Rifle Practice, Sept. 6, 1886.	N. Y.
<i>Supernumerary Officer Attached—Captain.</i> G. Henry Witthaus, March 1, 1879.....	.....	.....	.....
<i>Captains.</i> Solomon E. Japha, July 12, 1875.....	E	.....	N. Y.
George T. Lorigan, Jan. 11, 1883.....	A	Private, Co. E, 8th N. Y. S. Militia, June 10, 1861; discharged Aug. 2, 1861.	N. Y.
Noah L. Cocheu, June 23, 1884.	B	Second Lieutenant, Co. H, 53d N. Y. Vols., from Oct. 2, 1861; First Lieutenant, from Oct. 2, 1861; mustered out March 21, 1862; Private, Co. F, 2d N. Y. Vol. Cavalry; Second Lieutenant, 102d N. Y. Vols., Aug. 30, 1863; First Lieutenant, 102d N. Y. Vols., Nov. 16, 1863; discharged June 28, 1864; Brevet Captain, N. Y. Vols.	N. Y.
Henry W. Leonard, Nov. 4, 1885.....	I	.....	Ger.
William Wolcott Marks, Nov. 10, 1885.	F	.....	N. Y.

INFANTRY — NINTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—Continued.</i>				
Washington Willcocks, Nov. 22, 1887.	G	.....	Private, Co. G, 9th Regt., July 26, 1876; discharged August, 1881; reenlisted August, 1882; Sergeant, June 15, 1883; Second Lieutenant, Feb. 19, 1885; Captain, Nov. 22, 1887.	N. Y.
Joseph N. Billings, Nov. 23, 1887.	K	.....	Private, Co. K, 9th Regt., Nov. 3, 1880; Corporal, Jan. 5, 1881; Sergeant, July 12, 1882; Second Lieutenant, May 9, 1883; First Lieutenant, Nov. 12, 1884; Captain, Nov. 23, 1887.	N. Y.
John D. Walton, Aug. 9, 1888	D	.....	Private, Co. D, 9th Regt., Oct. 14, 1880; Corporal, Nov. 18, 1881; Sergeant, June 15, 1883; First Sergeant, Jan. 12, 1884; Second Lieutenant, July 16, 1885; First Lieutenant, Dec. 22, 1887; Captain, Aug. 9, 1888.	N. Y.
Frank A. Gale, Sept. 14, 1888.	H	.....	Private, Co. H, 9th Regt., April 7, 1882; Corporal, Sept. 1, 1884; Sergeant, Aug. 3, 1885; First Lieutenant, Dec. 22, 1885; resigned Nov. 30, 1887; Captain, Sept. 14, 1888.	N. Y.
<i>First Lieutenants.</i>				
Franklin Bartlett, April 4, 1884.	E	.....	First Lieutenant, Co. E, 9th Regt., April 4, 1884.	Mass.
Charles E. Kohlberger, Oct. 20, 1886.	I	.....	Private, Co. H, 96th Regt., Oct. 3, 1870; discharged Jan. 12, 1876; Private, Co. I, 9th Regt., Jan. 5, 1876; Sergeant, Dec. 1, 1878; First Sergeant, May 19, 1884; First Lieutenant, Oct. 20, 1886.	Austria.
Mack Hertz, April 18, 1888.	K	.....	.....	.....
James H. Maconnell, May 4, 1888.	H	.....	Private, Co. H, 9th Regt., June 7, 1886; Sergeant, Jan. 7, 1887; Second Lieutenant, April 18, 1887; First Lieutenant, May 4, 1888.	N. Y.

Henry Cleveland, July 23, 1888.....	B	Private, 5th Conn. Vols., July 22, 1862; Corporal; Sergeant-Major; honorably discharged July, 1864.	First Lieutenant, Co. B, 9th Regt., July 23, 1888.	Conn.
Godfrey A. S. Wieners, Oct. 4, 1888 ..	A	.....	Private, 17th Separate Company, April 20, 1885; Second Lieutenant, Co. A, 9th Regt., March 22, 1888; Lieutenant, Oct. 4, 1888.	N. Y.
Herbert C. Taylor, Oct. 23, 1888.....	G	.....	Private, Co. K, 7th Regt.; Dec. 20, 1882; First Lieutenant, Co. G, 9th Regt., Oct. 23, 1888.	N. J.
William H. Ehrmann, Nov. 10, 1885..	F	.....	Private, Co. E, 9th Regt., Oct. 23, 1878; Corporal, April 23, 1880; General Guide, 9th Regt., May 21, 1881; Regimental Quartermaster-Sergeant, Oct. 15, 1883; Second Lieutenant, Co. F, 9th Regt., Nov. 10, 1885.	Penn.
Emil J. Winterroth, June 15, 1887.....	H	.....	Private, 9th Regt., May 18, 1885; Corporal, Jan. 12, 1887; Second Lieutenant, Co. I, June 15, 1887; transferred to Co. H, Sept. 19, 1888.	N. Y.
John W. West, Dec. 29, 1887	B	.....	Private, 9th Regt., Sept. 6, 1877; honorably discharged July 15, 1884; reenlisted July 16, 1884; Sergeant, Sept. 8, 1884; First Sergeant, March 8, 1886; Second Lieutenant, Dec. 29, 1887.	Eng.
Wauhope Lynn, Feb. 16, 1888.....	D	.....	Private, Co. D, 9th Regt., Dec. 3, 1885; Second Lieutenant, Feb. 16, 1888.	Ire.

INFANTRY — (Continued).
TENTH BATTALION — (Four Companies).
Third Brigade.
Armories of Companies at Albany.

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Lieutenant-Colonel.</i> William E. Fitch; Aug. 22, 1883	Private, 177th N. Y. Vols., 10th N. G., S. N. Y., Oct. 11, 1862; First Sergeant, Oct. 11, 1862; honorably discharged Sept. 10, 1863; State Brevet of Second Lieutenant, N. Y. Vols.	Private, Co. E, 10th Regt., July 1, 1861; First Sergeant, May 15, 1862; Private, April 13, 1864; Adjutant, May 11, 1867; First Lieutenant, Co. E, Sept. 28, 1871; honorably discharged Dec. 31, 1873; First Lieutenant, Co. E, Feb. 13, 1874; Captain, Feb. 20, 1875; honorably discharged May 5, 1876; Private, Co. H, 10th Regt., Oct. 30, 1880; discharged by disbandment March 22, 1881; Private, Co. D, 10th Battalion, May 20, 1882; discharged March 1, 1883; Private, Co. D, June 1, 1883; Lieutenant Colonel, Aug. 22, 1883.	N. Y.
<i>Major.</i> Norton Chase, Feb. 18, 1886	First Lieutenant and Adjutant, 10th Battalion, Nov. 24, 1881; Major, Feb. 18, 1886.	N. Y.
<i>Adjutant—First Lieutenant.</i> James B. Sanders, April 1, 1886	Private, Co. A, 10th Regt., Jan. 28, 1879; Sergeant, June 22, 1882; discharged March 4, 1884; Private, Co. A, 10th Battalion, March 16, 1884; Sergeant-Major, March 10, 1884; First Lieutenant and Adjutant, April 1, 1886.	N. Y.
<i>Quartermaster—First Lieutenant.</i> William M. Whitney, Jr., Feb. 3, 1888.	Private, Co. A, 10th Regt., Oct. 14, 1870; Corporal, Feb. 15, 1883; honorably discharged, Feb. 5, 1885; Private, Co. A, 10th Battalion, Sept. 16, 1885; First Lieutenant and Quartermaster, 10th Battalion, Feb. 3, 1888.	N. Y.

<i>Surgeon—Major.</i> Lewis Balch, July 23, 1877.	.....	Captain and Assistant Surgeon, 37th Regt., March 31, 1870; Captain and Assistant Surgeon, 71st Regt., Nov. 7, 1871; Major and Surgeon, 71st Regt., Oct. 1, 1872; resigned July 3, 1873; Major and Surgeon, 10th Regt., July 23, 1877; Supernumerary, Feb. 17, 1881; assigned to duty with 10th Battalion, Sept. 28, 1881.	N. Y.
<i>Inspector of Rifle Practice—First Lieutenant.</i> William T. Miles, Nov. 1, 1886.	.....	Private, Co. H, 10th Regt., Oct. 20, 1880; discharged by disbandment, March 22, 1881; Private, Co. D, 10th Battalion, May 29, 1882; Commissary-Sergeant, Oct. 24, 1883; First Lieutenant and Inspector of Rifle Practice, Nov. 1, 1886.	N. Y.
<i>Captains.</i> Horatio P. Stacpole, Dec. 19, 1877; Brevet Major, Dec. 31, 1881.	..... B	Private, Co. B, 10th Regt., May 6, 1867; Corporal, March 9, 1868; Quartermaster-Sergeant, March 23, 1869; First Sergeant, April 16, 1870; First Lieutenant and Adjutant, Dec. 16, 1871; resigned Feb. 20, 1873; First Lieutenant, Co. B, Feb. 28, 1876; Captain, Dec. 19, 1877; Brevet Major, Dec. 31, 1881.	N. Y.
Edgar V. Denison, May 10, 1883.	..... D	Musician, 10th Regt., Feb. 1, 1864; discharged 1872; Private, Co. B, 10th Regt., April 1, 1878; Corporal, Oct. 8, 1881; First Lieutenant, Co. D, 10th Battalion, Nov. 23, 1882, Captain, May 10, 1883.	N. Y.
James L. Hyatt, June 2, 1884.	..... C	Private, Co. D, 10th Regt., Nov. 24, 1874; Corporal, Aug. 19, 1875; Quartermaster-Sergeant, Dec. 14, 1875; Private, Oct. 18, 1876; Regimental Quartermaster-Sergeant, Feb. 17, 1877; Sergeant-Major, April 6, 1880; discharged Feb. 17, 1881; Private, Co. D, 10th Battalion, Sept. 23, 1881; Sergeant-Major, Oct. 8, 1881; Second Lieutenant, Co. D, March 23, 1882; First Lieutenant, May 10, 1883; Captain, Co. K, June 2, 1884.	N. Y.
Albert J. Wing, March 22, 1886.	..... A	Private, Co. A, 10th Battalion, Jan. 3, 1881; Corporal, July 29, 1882; Sergeant, Feb. 1, 1883; First Sergeant, March 1, 1883; Second Lieutenant, Sept. 16, 1885; Captain, March 22, 1886.	N. Y.

INFANTRY — TENTH BATTALION — (Continued.)

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants.</i> Arthur W. Pray, Sept. 16, 1885.....	A	.....	Private, Co. C, 4th Battalion Mass. Vol. Militia, April 18, 1874; Corporal, Sept., 1874; Color-Sergeant of Battalion, Aug., 1875; Second Lieutenant, Jan. 17, 1876; First Lieutenant, Sept. 19, 1876; discharged Nov. 22, 1876; Private, Co. A, 10th Battalion, March 15, 1881; Sergeant, June 22, 1882; Second Lieutenant, Dec. 6, 1882; First Lieutenant, Sept. 16, 1885.	Mass.
Samuel D. Hyatt, Feb. 25, 1886	C	.....	Musician, Co. F, 10th Regt., Dec. 26, 1877; Drum-Major, Nov. 9, 1880; discharged March 22, 1881; Private, Co. D, 10th Battalion, Nov. 3, 1881; Corporal, Jan. 13, 1882; First Sergeant, March 1, 1883; discharged Aug. 6, 1883; Private, Co. K, 10th Battalion, Sept. 15, 1884; Second Lieutenant, Co. C, 10th Battalion, Jan. 8, 1885; First Lieutenant, Feb. 25, 1886.	N. Y.
G. James Greene, Oct. 15, 1887.....	B	.....	Private, Co. B, 10th Regt., Nov. 13, 1879; Corporal, Jan. 4, 1881; dropped Nov. 30, 1881; taken up, Private, Co. B, 10th Battalion, June 6, 1884; Corporal, Sept. 7, 1885; Sergeant, Jan. 18, 1886; First Sergeant, May 3, 1886; Second Lieutenant, Nov. 13, 1886; First Lieutenant, Oct. 15, 1887.	N. Y.
Anthime W. La Rose, May 30, 1888....	D	.....	Private, Co. D, 10th Battalion, Oct. 16, 1883; First Sergeant, Oct. 20, 1883; Second Lieutenant, July 10, 1884; First Lieutenant, May 30, 1888.	N. Y.

<i>Second Lieutenants.</i> Albert L. Judson, May 10, 1886.....	A	.....	Private, Co. A, 10th Battalion, April 11, 1883; Corporal, Sept. 23, 1883; Sergeant, March 20, 1884; First Sergeant, Oct. 5, 1885; Second Lieutenant, May 10, 1886.	N. Y.
Albert E. Batchelder, Nov. 12, 1887....	B	.....	Private, Co. B, 10th Battalion, Feb. 4, 1884; Corporal, Oct. 12, 1885; Sergeant, Jan. 11, 1886; First Sergeant, Nov. 29, 1886; Second Lieutenant, Nov. 12, 1887.	Wis.

ELEVENTH REGIMENT — (Nine Companies).

First Brigade.

Armory, Corner Grand and Ludlow streets, New York City.

<i>Colonel.</i> Albert P. Stewart, June 1, 1885.....	.....	Private, Co. K, 7th Regt., April 19, 1861, to June 3, 1861.	Private, Co. K, 7th N. Y. S. Militia, April 19, 1861, to June 3, 1861; Commissary of Subsistence, 11th Regt., Nov. 21, 1872-73; Major, April 30, 1875; Lieutenant-Colonel, Sept. 15, 1876; resigned April 10, 1877; Lieutenant-Colonel, Feb. 8, 1884; Colonel, June 1, 1885.	N. Y.
<i>Lieutenant-Colonel.</i> William P. Walton, Sept. 9, 1885.....	.....	Second Lieutenant, Co. D, 12th N. Y. Vols., Feb. 3, 1862; honorably discharged for disability Dec. 5, 1862.	Private, 37th N. Y. S. Militia, March, 1861; Corporal, May, 1861; dropped Feb. 3, 1862; Second Lieutenant, Co. G, 1st Battalion, N. G., S. N. Y., Dec. 8, 1873; Captain, Jan. 6, 1874; Supernumerary, Aug., 1875; Captain, Co. F, 9th Regt., Aug. 17, 1875; Lieutenant-Colonel, 11th Regt., Sept. 9, 1885.	N. Y.
<i>Major.</i> Frank A. Jones, Aug. 21, 1885.....	.....	.....	Private, Co. G, 7th Regt., Jan. 24, 1880; Major, 11th Regt., Aug. 21, 1885.	N. Y.
<i>Adjutant—First Lieutenant.</i> .....	.....	.....	.....	.....
<i>Quartermaster—First Lieutenant.</i> Frederick Yung, Sept. 30, 1885.....	.....	.....	Private, Co. C, 55th Regt.; honorably discharged Dec. 5, 1872; Private, Separate Troop K, June, 1876; First Lieutenant, Co. B, 11th Regt., Oct. 10, 1879; Quartermaster, Sept. 30, 1885.	Ger.

INFANTRY — ELEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Commissary of Subsistence—First Lieutenant.</i>				
<i>Surgeon—Major.</i>				
Wolfgang Goetz, Nov. 19, 1883.			First Lieutenant and Assistant Surgeon, April 23, 1883; Major and Surgeon, Nov. 19, 1883.	N. Y.
<i>Assistant Surgeon—Captain.</i>				
George William Collins, June 30, 1885.			Captain and Assistant Surgeon, 11th Regt., June 30, 1885.	N. Y.
<i>Chaplain—Captain.</i>				
<i>Inspector of Rifle Practice—Captain.</i>				
Joseph Worster Hale, May 18, 1886.			Private, Co. G, 7th Regt., July 7, 1876; Captain and Inspector of Rifle Practice, 11th Regt., May 18, 1886.	Ger.
<i>Captains.</i>	C			
Theodore F. Schmidt, May 21, 1885.			Second Lieutenant, 11th Regt., April 19, 1883; Captain, May 21, 1885.	Ger.
Charles F. Surbrug, Oct. 12, 1885.	I	In U. S. Navy, 1868 to 1873.	Private, Co. C, 11th Regt., July 22, 1882; Sergeant, Feb. 20, 1885; First Sergeant, May 20, 1885; Second Lieutenant, Co. I, Aug. 14, 1885; Captain, Oct. 12, 1885.	Ohio.
<i>Captains.</i>	B			
George W. Mooney, April 14, 1887.			Private, Co. F, 9th Regt., April 10, 1882; Corporal, Jan. 12, 1885; Second Lieutenant, Co. F, 11th Regt., Sept. 28, 1885; First Lieutenant, Co. B, Nov. 23, 1885; Captain, April 14, 1887.	Eng.
<i>Captains.</i>	H			
Charles H. Collins, Feb. 6, 1888.		Second Lieutenant in Ottawa Militia, Dominion of Canada.	First Lieutenant, Co. H 11th Regt., Oct. 13, 1885; Captain, Feb. 6 1888.	N. Y.

Harold Christensen, Feb. 13, 1888.....	K	.....	Private, Co. A, 11th Regt., May 21, 1883; Corporal, Feb. 4, 1884; First Sergeant, May 5, 1885; Second Lieutenant, June 8, 1885; First Lieutenant, Co. K, Jan. 17, 1887; Captain, Feb. 13, 1888.	Den.
James M. Rankin, April 6, 1888.....	G	.....	Private, 23d Regt., Oct. 5, 1873; Corporal, Co. B, Oct. 19, 1874; Sergeant, Jan. 6, 1875; Color-Bearer, 23d Regt., April 2, 1883; Sergeant-Major, Feb. 11, 1884; honorably discharged June 2, 1886; First Lieutenant, Co. G, 11th Regt., Oct. 10, 1887; Captain, April 6, 1888.	N. Y.
Walter L. Miller, April 24, 1888.....	A	.....	Private, Co. D, 7th Regt., April 13, 1883; Second Lieutenant, Co. D, 11th Regt., Jan. 26, 1887; First Lieutenant, Nov. 9, 1887; Captain, Co. A, April 24, 1888.	N. Y.
Joseph Obermeyer, June 12, 1882.....	C	.....	Private, Co. C, 11th Regt., Nov. 1, 1878; Corporal, Jan. 21, 1880; Sergeant, Aug. 4, 1880; First Sergeant, Jan. 4, 1881; First Lieutenant, June 12, 1882.	Ger.
Richard A. Denahan, Oct. 5, 1885.....	F	.....	Private, Co. F, 9th Regt., Oct. 13, 1875; First Lieutenant, Co. F, 11th Regt., Oct. 5, 1885.	N. Y.
Robert A. Elliott, Oct. 4, 1887.....	A	.....	Private, 12th Regt., April, 1885; First Lieutenant, 11th Regt., Oct. 4, 1887.	N. Y.
Christopher L. Levien, May 7, 1888..	I	.....	Private, 22d Regt., April, 1884; First Lieutenant, Co. I, 11th Regt., May 7, 1888.	N. Y.
Charles Muecke, May 9, 1888.....	B	.....	Private, Co. H, 22d Regt., May 1, 1885; Corporal, June, 1886; Sergeant, June, 1887; transferred to Co. C, 11th Regt., Nov., 1887; Sergeant-Major, Nov. 7, 1887; First Lieutenant, Co. B, May 9, 1888.	Ger.
Louis L. Coudert, June 4, 1888.....	G	.....	Private, Co. F, 7th Regt., Dec., 1883; Second Lieutenant, 11th Regt., March 11, 1886; First Lieutenant, June 4, 1888.	N. Y.
Louis Gumbart, March 11, 1886.....	F	.....	Private, 1st Battalion, Feb. 21, 1870; discharged by disbandment, Aug., 1875; Private, Co. F, 9th Regt., Aug. 17, 1875; discharged Feb. 21, 1885; Private, Co. F, 11th Regt., Dec. 1, 1885; Second Lieutenant, March 11, 1886.	N. Y.
Percy P. May, Nov. 18, 1887.....	B	.....	Private, 22d Regt., Feb., 1886; Second Lieutenant, 11th Regt., Nov. 18, 1887.	Pa.

INFANTRY — ELEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenants—(Continued).</i>				
Warren F. H. Tupper, Nov. 30, 1887..	D	.....	Private, 7th Regt., Oct., 1884; Second Lieutenant, 11th Regt., Nov. 30, 1887.	N. Y.
Gustav M. Junker, Dec. 9, 1887	C	.....	Private, 22d Regt., Oct. 25, 1885; Second Lieutenant, Co. C, 11th Regt., Dec. 9, 1887.	Ger.
Arthur M. Tompkins, March 1, 1888..	H	.....	Private, Co. H, 22d Regt., Oct. 30, 1884; Second Lieutenant, Co. H, 11th Regt., March 1, 1888.	N. Y.
TWELFTH REGIMENT — (Ten Companies).				
First Brigade.				
<i>Armory, Broadway, Corner Ninth avenue and Sixty-first street, New York City.</i>				
<i>Colonel.</i>				
.....
<i>Lieutenant-Colonel.</i>				
Heman Dowd, April 29, 1885.....	.....	Cadet, U. S. Military Academy, July 1, 1872; Second Lieutenant, 3d U. S. Artillery, June 15, 1876; First Lieutenant, 3d U. S. Artillery, Nov. 1, 1881; resigned June 1, 1883.	Lieutenant-Colonel, 12th Regt., April 29, 1885	N. Y.
<i>Major.</i>				
John Jackson Riker, Jan. 9, 1884 .....	.....	.....	Private, Co. I, 7th Regt., May 26, 1878; First Lieutenant and Aide-de-Camp, 1st Brigade, Aug. 7, 1879; Captain and Aide-de-Camp, April 1, 1880; Major and Inspector of Rifle Practice, May 19, 1880; resigned Feb. 18, 1881; Captain and Ordnance Officer, 1st Brig., Feb. 18, 1881; Major and Inspector, Oct. 27, 1882; honorably discharged Oct. 25, 1883; Major, 12th Regt., Jan. 9, 1884.	N. Y.

<i>Adjutant—First Lieutenant.</i>					
<i>Quartermaster—First Lieutenant.</i> Edward R. Powers, Jan. 30, 1882.				Commissary of Subsistence, 12th Regt., Jan. 18, 1879; Quartermaster, Jan. 30, 1882.	Mass.
<i>Commissary of Subsistence—First Lieutenant.</i> J. Emory Haskell, July 5, 1887.				Second Lieutenant, Co. A, 12th Regt., Dec. 8, 1884; First Lieutenant, Oct. 13, 1885; Captain, Co. C, April 19, 1886; First Lieutenant and Commissary of Subsistence, July 5, 1887.	N. Y.
<i>Surgeon—Major.</i> Nelson H. Henry, Jan. 23, 1885.				Assistant Surgeon, 12th Regt., March 16, 1883; Captain and Assistant Surgeon, May 21, 1884; Major and Surgeon, Jan. 23, 1885.	N. Y.
<i>Assistant Surgeon—Captain.</i> Charles Lutellus Lindley, Jan. 23, 1885.				Captain and Assistant Surgeon, 12th Regt., Jan. 23, 1885.	N. Y.
<i>Chaplain—Captain.</i> William B. Frisbee, July 1, 1882.				Chaplain, 12th Regt., July 1, 1882.	Md.
<i>Inspector of Rifle Practice—Captain.</i> John Macauley, Dec. 31, 1886.				Private, Co. H, 12th Regt., Dec. 1, 1869; Corporal, Oct. 5, 1870; Second Lieutenant, Co. F, Feb. 21, 1884; First Lieutenant, Dec. 17, 1885; Captain, Co. C, Dec. 31, 1886; Captain and Inspector of Rifle Practice, 12th Regt., Jan. 25, 1888, with original rank.	Ire.
<i>Supernumerary Officer Attached—Captain.</i> James M. Brady, Oct. 27, 1871.					
<i>Captains.</i> Charles S. Burns, Dec. 6, 1872.	B	Private, Co. C, 70th N.Y. Vols., May 3, 1861; discharged on account of wounds Dec. 7, 1862; Private, Co. E, 76th Regt., Pa. Vols., Oct., 1864; discharged July 18, 1865.		Private, Co. F, 12th Regt., Oct. 27, 1869; First Sergeant, Nov. 3, 1869; Second Lieutenant, Jan. 5, 1870; First Lieutenant, June 13, 1870; Captain, Co. B, Dec. 6, 1872.	Scot.

INFANTRY — TWELFTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Henry C. Aspinwall, Nov. 24, 1880....	I	.....	Private, 22d Regt., Nov. 18, 1875; Corporal, Oct. 24, 1877; Company Quartermaster-Sergeant, April 28, 1879; Second Lieutenant, Co. B, 12th Regt., May 7, 1880; Captain, Co. I, Nov. 24, 1880.	Eng.
William H. Kirby, Jr., June 20, 1882..	G	.....	Private, Co. A, 12th Regt., May 1, 1865; Corporal, Oct. 1, 1866; Regimental Quartermaster-Sergeant, May 31, 1867; Sergeant-Major, Nov. 12, 1867; Second Lieutenant, Co. G, Feb. 7, 1871; First Lieutenant, Jan. 25, 1876; Captain, June 20, 1882.	N. Y.
Washington Content, March 27, 1883.	H	.....	Private, Co. A, 12th Regt., Nov. 15, 1880; Corporal, Dec. 16, 1880; Sergeant, Jan. 21, 1881; Second Lieutenant, Co. H, Sept. 6, 1881; First Lieutenant, March 14, 1882; Captain, March 27, 1883.	N. Y.
William H. Murphy, Dec. 20, 1883....	F	Private, Co. A, 12th N. Y. S. Militia, from May 2 to Aug. 5, 1861; Sergeant, from May 31 to Oct. 12, 1862.	Private, Co. A, 12th Regt., April 19, 1861; Sergeant, May, 1862; Private, Oct. 12, 1862; Sergeant, Nov. 3, 1862; Sergeant-Major, 12th Regt., Oct. 3, 1863; Adjutant, May 20, 1867; Captain, Co. F, Dec. 20, 1883.	Ire.
Bleecker S. Barnard, Aug. 1, 1884....	D	.....	Private, Co. D., 22d Regt., May 9, 1878; Corporal, Jan. 21, 1881; Sergeant, Feb. 15, 1882; First Sergeant, April 6, 1883; First Lieutenant, Co. H, 12th Regt., Feb. 5, 1884; Captain, Co. D, Aug. 1, 1884.	N. Y.
Howland Pell, Aug. 25, 1885.....	A	.....	Private, Co. I, 7th Regt., June 7, 1875; honorably discharged Sept. 7, 1881; Second Lieutenant, Co. E, 12th Regt., Feb. 8, 1884; First Lieutenant, Co. G, 12th Regt., June 3, 1884; Captain, Co. A, Aug. 25, 1885.	N. Y.

John F. Boylan, Oct. 26, 1885.....	K	Second Lieutenant, Co. F, 12th Regt., Nov. 19, 1883; First Lieutenant, Feb. 21, 1884; Captain, Co. K, Oct. 26, 1885.	N. J.
Rufus Delafeld, Aug. 10, 1887.....	C	Second Lieutenant, Co. I, 12th Regt., May 22, 1864; First Lieutenant, July 23, 1885; Captain, Co. C, Aug. 10, 1887.	N. Y.
Frank Roosevelt, Feb. 24, 1888.....	E	Second Lieutenant, Co. E, 12th Regt., April 5, 1886; First Lieutenant, Aug. 27, 1886, Captain, Feb. 24, 1888.	N. Y.
Samuel Parsons, April 7, 1885.....	H	Private, Co. K, 7th Regt., Oct. 24, 1879; Second Lieutenant, 12th Regt., Jan. 6, 1885; First Lieutenant, April 7, 1885.	N. Y.
Edward C. Smith, Dec. 28, 1885.....	A	Private, Co. A, 12th Regt., Jan. 4, 1882; promoted Corporal, June 22, 1882; First Sergeant, Dec. 28, 1882; First Lieutenant, Dec. 28, 1885.	Ire.
Charles M. Jessup, July 13, 1887.....	C	Private, 7th Regt., April, 1874; discharged April, 1885; Second Lieutenant, Co. C, 12th Regt., March 24, 1887; First Lieutenant, July 13, 1887.	N. Y.
Frederick Foster Carey, Sept. 29, 1887.	I	Private, Co. I, 12th Regt., July 23, 1885; Second Lieutenant, July 23, 1885; First Lieutenant, Sept. 29, 1887.	N. Y.
Arthur E. Schuman, Oct. 18, 1887.....	G	Second Lieutenant, 11th Regt., Nov. 27, 1885; First Lieutenant, Oct. 25, 1886; resigned May 11, 1887; Second Lieutenant, 12th Regt., May 24, 1887; First Lieutenant, Oct. 18, 1887.	Ohio.
Augustus Baus, Oct. 3, 1888.....	D	Second Lieutenant, Co. D, 12th Regt., Oct. 28, 1885; First Lieutenant, Oct. 3, 1888.	N. Y.
Gilbert K. Harroun, Jr., Oct. 22, 1888.	B	Private, Co. F, 7th Regt., July 15, 1875; Corporal, Feb. 21, 1878; discharged Oct. 20, 1881; First Lieutenant, Co. B, 12th Regt., Oct. 22, 1888.	N. Y.
Henry Gallup Paine, Oct. 26, 1888.....	E	Private, Co. E, 12th Regt., May 26, 1887; Second Lieutenant, Aug. 26, 1887; First Lieutenant, Oct. 26, 1888.	N. Y.
Harrie Cozzens Appleton, Dec. 28, 1883	B	Second Lieutenant, Co. B, 12th Regt., Dec. 28, 1883.	N. Y.
Edmund L. Knodler, April 7, 1885....	H	Private, Co. K, 7th Regt., Oct. 15, 1881; Second Lieutenant, 12th Regt., April 7, 1885.	N. Y.
J. Langdon Erving, May 12, 1887.....	F	Private, Co. F, 7th Regt., Dec. 2, 1884; Second Lieutenant, 12th Regt., May 12, 1887.	N. Y.

INFANTRY — TWELFTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenants—(Continued).</i>				
William F. Catterfield, Oct. 27, 1887 ..	I	.....	Private, Co. I, 7th Regt., Oct. 2, 1883; Second Lieutenant, 12th Regt., Oct. 27, 1887.	N. Y.
Archibald K. K. Mackay, Dec. 21, 1887 ..	C	.....	.....	.....
Julian Sternberger, Feb. 13, 1888	A	.....	Private, Co. A, 12th Regt., Oct. 1883; Second Lieutenant, Feb. 13, 1888.	N. Y.
William S. Gribble, May 8, 1888.....	G	.....	Private Co. B, 12th Regt., Nov. 20 1885; Corporal, May 10, 1886; Sergeant, March 9, 1887; Second Lieutenant, Co. G, May 8, 1888.	N. Y.

THIRTEENTH REGIMENT—(Ten Companies.)

Second Brigade.

Armory, Corner Flatbush avenue and Hanson place, Brooklyn.

<i>Colonel.</i>	.....	.....	.....	N. Y.
David E. Austen, July 13, 1877.....	.....	.....	.....	Private, Co. H, 7th Regt., Feb. 14, 1859; Lieutenant, Co. I, 47th Regt., Nov. 4, 1862; Adjutant, 47th Regt., Aug. 10, 1863; Captain, Co. I, March 14, 1864; Major, 47th Regt., Oct. 16, 1865; Lieutenant-Colonel, Jan. 25, 1868; Colonel, May 9, 1868; Colonel, 13th Regt., July 13, 1877; Supernumerary, Dec. 3, 1883; Colonel, 13th Regt., Jan. 5, 1888, with original rank.

<i>Lieutenant-Colonel.</i> William J. Harding, Feb. 8, 1886.....	Gunner, 1st Gloucester (England) Artillery Vols., Battery D, July, 1860, to July, 1863; Private, Co. A, 7th N. H. Vols., Oct. 14, 1863; Corporal, May 30, 1864; Sergeant, Dec. 22, 1864; First Lieutenant and Adjutant, 38th U. S. Colored Troops, March, 7, 1865; Captain, April 9, 1866; honorably discharged March 18, 1867.	Private, Co. B, 22d Regt., July 14, 1867; Adjutant, 22d Regt., Oct. 7, 1869; Captain, Jan. 7, 1873; honorably discharged Jan. 20, 1876; Adjutant, Aug. 1, 1877; Lieutenant-Colonel Feb. 8, 1886; Lieutenant-Colonel, 13th Regt., July 5, 1888, with original rank.	Eng.
<i>Major.</i> Richard P. Morle, April 10, 1888.....	.....	Second Lieutenant, Co. F, 47th Regt., Oct. 6, 1873; First Lieutenant, Dec. 7, 1874; Captain, Dec. 3, 1877; Captain, Co. F, 13th Regt., July 20, 1880; discharged Sept. 8, 1882; Captain, Co. K, 13th Regt., Oct. 3, 1884; Major, 13th Regt., April 10, 1888.	Barbadoes.
<i>Adjutant—First Lieutenant.</i> Russell Benedict, Jan. 26, 1888.....	.....	Private, Co. B, 13th Regt., Oct. 29, 1879; Left General Guide, Sept. 16, 1880; Quartermaster-Sergeant, Feb. 7, 1881; Sergeant-Major, May 6, 1881, Second Lieutenant, Co. H, Sept. 5, 1883; First Lieutenant, March 5, 1884; out of service May 4, 1887; First Lieutenant and Adjutant, 13th Regt., Jan. 26, 1888.	N. Y.
<i>Quartermaster—First Lieutenant.</i> Charles Werner, Jan. 16, 1888.....	.....	Private, 13th Regt., Oct. 4, 1878; Quartermaster-Sergeant, Co. H, June 8, 1880; Regimental Quartermaster-Sergeant, June 3, 1881; First Lieutenant and Quartermaster, April 15, 1885; honorably discharged Nov. 17, 1886; First Lieutenant and Quartermaster, 13th Regt., Jan. 16, 1888.	N. Y.
<i>Commissary of Subsistence—First Lieutenant.</i> Jeré A. Wernberg, Feb. 6, 1888.....	.....	Second Lieutenant, Co. C, 13th Regt., Feb. 19, 1880; First Lieutenant and Commissary of Subsistence, 13th Regt., Oct. 22, 1880; resigned June 28, 1883; First Lieutenant and Commissary of Subsistence, 13th Regt., Feb. 6, 1888.	N. Y.

INFANTRY — THIRTEENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Surgeon—Major.</i> John A. Cochran, May 24, 1888.	.....	.....	Captain and Assistant Surgeon, 13th Regt., Jan. 23, 1888; Major and Surgeon, May 24, 1888.	N. Y.
<i>Assistant Surgeon—Captain.</i> Arthur R. Jarrett, June 7, 1888.	.....	.....	Private, Co. E, 13th Regt., Nov. 7, 1871; honorably discharged Oct. 13, 1879; Private, Co. G, 13th Regt., Feb. 2, 1883; Captain and Assistant Surgeon, 13th Regt., June 7, 1888.	N. Y.
<i>Chaplain—Captain.</i> T. DeWitt Talmadge, Jan. 9, 1888.	.....	Chaplain in a Pa. regiment in 1863.	Captain and Chaplain, 13th Regt., Jan. 9, 1888....	N. J.
<i>Inspector of Rifle Practice—Captain.</i> Theodore H. Babcock, Jan. 9, 1888.	.....	.....	Captain and Inspector of Rifle Practice, 13th Regt., March 10, 1881; resigned Nov. 17, 1886; Captain and Inspector of Rifle Practice, 13th Regt., Jan. 9, 1888.	Conn.
<i>Captains.</i> William L. Watson, July 8, 1878.	G	Private, Co. G, 21st Wisconsin Vols., Aug. 20, 1862; Sergeant, Second and First Lieutenant and Captain; honorably discharged June 8, 1865.	Private, Co. E, 7th Regt., Aug. 15, 1871; discharged Aug. 15, 1878; Captain, Co. G, 13th Regt., July 8, 1878.	Scot.
William J. Collins, Aug. 12, 1881.	A	.....	Private, 13th Regt., Sept. 20, 1863; Corporal, Feb. 23, 1869; Sergeant, May 12, 1870; First Sergeant, Jan. 19, 1877; Second Lieutenant, Nov. 14, 1877; First Lieutenant, Oct. 15, 1878; Captain, Aug. 12, 1881.	N. Y.
Charles O. Davis, Oct. 21, 1884.	D	.....	Private, 13th Regt., Oct. 6, 1880; Sergeant, Sept. 13, 1881; Second Lieutenant, Dec. 18, 1882; First Lieutenant Co. A, Jan. 21, 1884; Captain, Co. D, Oct. 21, 1884.	N. Y.

William Kerby, May 22, 1885.....	E	.....	Musician, Co. K, 14th Regt., Sept. 1873; transferred to Co. C, 23d Regt., Sept. 17, 1876; Second Lieutenant, Co. E, 13th Regt., Oct. 27, 1880; First Lieutenant, June 17, 1881; Captain, May 22, 1885.	N. Y.
Willoughby Powell, March 19, 1886....	B	.....	Private, Co. B, 7th Regt., July 6, 1857; transferred to Engineer Corps, 13th Regt., Nov. 5, 1860; First Sergeant, Co. F, 13th Regt., in 1861; First Lieutenant, Co. K, 13th Regt., May 27, 1862; Captain, April 2, 1863; was appointed Adjutant March 2, 1865; discharged Jan. 18, 1866; Captain, Co. B, 13th Regt., March 19, 1886.	N. Y.
J. Frank Dillont, Feb. 4, 1887	F	.....	Private, Co. E, 7th Regt., April 3, 1874; First Lieutenant, 13th Regt., Aug. 17, 1875; Captain, Dec. 5, 1876; Major, March 12, 1880; Lieutenant-Colonel, July 29, 1880; discharged April 13, 1881; Captain, 13th Regt., Feb. 4, 1887.	Eng.
William Henry Albert Cochran, July 6, 1887.....	H	.....	Private, Co. H, 13th Regt., April 21, 1883; Corporal, June 6, 1883; Second Lieutenant, Co. K, Nov. 11, 1885; First Lieutenant, Jan. 27, 1886; Captain, Co. H, July 6, 1887.	N. Y.
George G. Cochran, Jan. 16, 1888.....	I	.....	Second Lieutenant, Co. I, 13th Regt., June 4, 1886; First Lieutenant, May 6, 1887; Captain, Jan. 16, 1888.	N. Y.
Charles H. Luscomb, June 21, 1888....	K	.....	First Lieutenant, 22d Regt., Dec. 20, 1880; resigned Feb. 14, 1883; Captain, 13th Regt., June 21, 1888.	Mass.
William Atwood French, Nov. 15, 1888	C	.....	Private, Co. H, 23d Regt., Dec. 1865; transferred to Co. A, 7th Regt., May 10, 1868; Corporal, 1872; Sergeant, April 26, 1875; First Sergeant, March 31, 1879; returned to the ranks Feb. 28, 1881; Captain, Co. C, 13th Regt., Nov. 15, 1888.	Conn.
Robert Henry Sillman, March 11, 1884	F	United States Military Academy Cadet, Aug. 28, 1883, to Jan. 8, 1884.	Private, Co. F, 13th Regt., Feb. 28, 1879; Corporal, Feb. 3, 1881; Sergeant, July 7, 1881; First Sergeant, Nov. 8, 1882; dropped August 28, 1883; First Lieutenant, Co. F, 13th Regt., March 11, 1884.	N. Y.

First Lieutenants.

INFANTRY — THIRTEENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants—(Continued).</i> John F. O'Connor, June 8, 1885.....	A	.....	Private, Co. G, 13th Regt., July 26, 1878; Corporal, Jan. 17, 1881; Sergeant, Feb. 4, 1884; discharged Oct. 24, 1884; Private, Third Battery, Oct. 27, 1884; Corporal, Jan. 5, 1885; First Lieutenant, 13th Regt., June 8, 1885.	N. Y.
William A. Brown, Oct. 30, 1885	E	Private, Co. B, 13th Regt., N. G., S. N. Y., May 28 to Sept. 4, 1862, and June 20 to July 20, 1863.	Private, Co. B, 13th Regt., May 28, 1862; Corporal, April 14, 1864; Sergeant, April 13, 1868; First Sergeant, Sept. 25, 1876; Second Lieutenant, Dec. 4, 1876; First Lieutenant, Oct. 25, 1879; Captain, Feb. 18, 1884; resigned Oct. 30, 1885; First Lieutenant, Co. E, 13th Regt., Oct. 30, 1885.	N. Y.
Charles P. Fish, Dec. 28, 1885.....	C	Lanarkshire Rifle Vols., Glasgow, Scotland, March, 1880; served one year.	Private, Co. E, 13th Regt., May 13, 1882; Corporal, Sept. 5, 1882; transferred to Co. D, May 29, 1884; Corporal, June 2, 1885; First Lieutenant, Co. C, Dec. 28, 1885.	N. Y.
George C. Broome, April 30, 1888	I	.....	Brigade Sergeant and Color-Bearer, 2d Brigade, M. V. M., Jan. 19, 1886; discharged Oct. 4, 1887; Second Lieutenant, Co. I, 13th Regt., Sept. 16, 1887; First Lieutenant, April 30, 1888.	N. Y.
Henry M. Tienken, May 2, 1888.....	H	.....	Private, Co. H, 13th Regt., July 17, 1876; honorably discharged Nov. 25, 1881; reenlisted May 2, 1884; Sergeant, July 2, 1884; honorably discharged May 15, 1885; reenlisted Dec. 21, 1887; First Lieutenant, May 2, 1888.	N. Y.

William H. Coughlin, June 18, 1888 ..	B	Sergeant, Co. H, 13th Regt., June 20 to July 20, 1863.	Private, Co. H, 13th Regt., March 1, 1862; Sergeant, First Lieutenant and Aide-de-Camp, 5th Brigade, April 5, 1870; Major and Inspector, Sept. 17, 1870; resigned June 24, 1872; Second Lieutenant, Co. B, 13th Regt., June 7, 1886; First Lieutenant, June 18, 1888.	N. Y.
William Waldron Hanold, Sept. 17, 1888	G	In U. S. Navy from 1865 to 1871.	Private, Howitzer Battery, 11th Brigade, Oct. 25, 1875; Corporal, Feb. 7, 1876; Sergeant, Gattling Battery, March 4, 1878; Second Lieutenant, Co. D, 13th Regt., Nov. 18, 1879; First Lieutenant, Sept. 3, 1880; First Lieutenant, 3d Battery, Sept. 2, 1882; First Lieutenant, Co. G, 13th Regt., Sept. 17, 1888.	N. Y.
Fred. G. Peoble, Nov. 8, 1888	D	.....	Private, 21st Separate Company, July 8, 1877; Corporal, May 7, 1878; Private, Dec. 7, 1878; discharged Nov. 7, 1882; Private, Co. E, 13th Regt., March 29, 1883; Corporal, Dec. 4, 1883; Sergeant, March 14, 1885; transferred to Co. D, June 12, 1885; Second Lieutenant, July 9, 1886; First Lieutenant, Nov. 8, 1888.	N. Y.
Charles W. Wilder, Jr., Dec. 3, 1888 ..	K	.....	Private and non-commissioned officer, Co. A, 4th Battalion Infantry, Massachusetts Volunteer Militia, June, 1874, to Jan. 1877; Second Lieutenant, Co. D, 1st Battalion Infantry, Massachusetts Volunteer Militia, April 29, 1878; Adjutant, 1st Regt. Infantry, Massachusetts Volunteer Militia, May 19, 1879; discharged Feb. 14, 1881; First Lieutenant, Co. K, 13th Regt., Dec. 3, 1888.	Mass.
<i>Second Lieutenants.</i>				
Frank R. Wiswell, Aug. 16, 1887.	A	.....	Second Lieutenant, Co. A, 13th Regt., Aug. 16, 1887.	N. Y.
Lionel E. Broun, March 2, 1888	E	.....	Private, 23d Regt., May 12, 1879; honorably discharged Dec. 22, 1884; Second Lieutenant, Co. E, 13th Regt., March 2, 1888.	N. Y.
Charles G. Tinker, June 13, 1888	I	.....	Private, Co. I, 23d Regt., Oct. 30, 1886; Second Lieutenant, Co. I, 13th Regt., June 13, 1888.	D. C.
John A. Anderson, June 21, 1888	C	.....	Private, Co. G, 23d Regt., Oct. 10, 1879; Corporal, April 1, 1881; Sergeant Standard-Bearer, May 25, 1885; honorably discharged Feb. 8, 1886; Second Lieutenant, Co. C, 13th Regt., June 21, 1888.	N. J.

INFANTRY — THIRTEENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	In the Armies of the United States.	SERVICE.	In the National Guard.	Born.
<i>Second Lieutenants—(Continued).</i>					
George W. Rodgers, July 13, 1888.	K				
FOURTEENTH REGIMENT — (Ten Companies).					
Second Brigade.					
Armory, Corner North Portland avenue and Auburn place, Brooklyn.					
<i>Colonel.</i>					
Harry W. Michell, Nov. 30, 1885.		Private, 14th N. Y. S. Militia (84th N. Y. Vols.), April 18, 1861; Corporal, Aug. 1, 1861; Sergeant, Nov. 1, 1861; Second Lieutenant, Feb. 11, 1863; Lieutenant, Nov. 1, 1861; Second Lieutenant, Feb. 11, 1863; First Lieutenant, July 27, 1863; honorably discharged March 12, 1865.	Private, Co. C, 14th Regt., April 18, 1861; Corporal, Aug. 1, 1861; Sergeant, Nov. 1, 1861; Second Lieutenant, Feb. 11, 1863; Captain, May 25, 1865; Major, 14th Regt., March 25, 1875; Lieutenant-Colonel, Oct. 29, 1883; Colonel, Nov. 30, 1885.		N. Y.
<i>Lieutenant-Colonel.</i>					
Selden C. Clobridge, Nov. 30, 1885.		Private, Co. G, 115th N. Y. Vols., Aug. 8, 1862; Corporal, Aug., 1862; Sergeant, Jan. 15, 1863; First Lieutenant, April 29, 1865; discharged (loss of right arm) June 5, 1865; Brevet Major, N. Y. S. Vols.	Adjutant, 14th Regt., May 1, 1878; Major, Oct. 29, 1883; Lieutenant-Colonel, Nov. 30, 1885.		N. Y.
<i>Major.</i>					
John McNeill, Nov. 30, 1885.		Sergeant, 14th N. Y. S. Militia (84th N. Y. Vols.), April 18, 1861; First Sergeant, Aug. 10, 1861; Second Lieutenant, Feb. 15, 1862; Captain, Aug. 27, 1862; honorably discharged June 6, 1864; Brevet Major, U. S. Vols.	Private, 14th Regt., Oct. 18, 1856; Corporal, Nov. 20, 1858; Sergeant, April 18, 1861; First Sergeant, Aug. 10, 1861; Second Lieutenant, Feb. 15, 1862; Captain, Aug. 27, 1862; Brevet Major; Major, Nov. 30, 1885.		Ire.

<i>Adjutant—First Lieutenant.</i> Alfred B. Campbell, Aug. 4, 1884.....	.....	Private, Co. K, 14th Regt., Jan. 14, 1878; Quartermaster-Sergeant, Oct. 12, 1881; Commissary Sergeant of Regiment, Feb. 4, 1884; First Lieutenant, Co. K, Aug. 4, 1884; Adjutant, Oct. 13, 1886, with original rank.	N. Y.
<i>Quartermaster—First Lieutenant.</i> Alexander Barrie, Jr., Feb. 11, 1876.....	.....	Corporal, Co. A, 14th N. Y. S. Militia (84th N. Y. Vols.), May 23, 1861; Regimental Quartermaster-Sergeant, Sept. 1, 1861; honorably discharged, June 6, 1864.	N. Y.
<i>Commissary of Subsistence—First Lieutenant.</i> Walter H. Fitzgerald, Nov. 21, 1887.....	.....	Private, 114th Pa. Vols., Aug. 1, 1862; Corporal, honorably discharged March 3, 1863.	Pa.
<i>Surgeon—Major.</i> J. Freeman Atwood, Jan. 3, 1887.....	.....	Major and Surgeon, 14th Regt., Jan. 3, 1887.....	N. J.
<i>Assistant Surgeon—Captain.</i> Frank L. R. Tetamore, June 2, 1886.....	.....	Hospital Steward, 13th Regt., April 14, 1879; Captain and Assistant Surgeon, June 2, 1886.	N. Y.
<i>Chaplain—Captain.</i> J. Oramel Peck, May 22, 1882.....	.....	Captain and Chaplain, 14th Regt., May 22, 1882...	Vt.
<i>Inspector of Rifle Practice—Captain.</i> Ramon Cardona, July 17, 1865.....	.....	Private, 14th Regt., Sept. 10, 1856; Corporal, April 18, 1861; Sergeant, Aug. 10, 1861; Second Lieutenant, Feb. 26, 1862, First Lieutenant, Aug. 29, 1862; Captain, July 17, 1865; Captain and Inspector of Rifle Practice, Aug. 1, 1887, with original rank.	Spain.
<i>Captains.</i> Benjamin S. Steen, Nov. 22, 1872..... C	.....	Private, 14th Regt., Oct. 15, 1858; Corporal, April 22, 1861; Sergeant, Aug. 1, 1861; Second Lieutenant, May 27, 1865; First Lieutenant, Nov. 2, 1867; Captain, Nov. 22, 1872.	N. Y.

INFANTRY — FOURTEENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Joseph R. K. Barlow, March 22, 1880.	E	.....	Private, 23d Regt., Dec. 17, 1872; Second Lieutenant, 14th Regt., March 28, 1878; First Lieutenant, Sept. 11, 1878; Captain, March 22, 1880.	Mo.
John J. Dixon, Jan. 10, 1884.....	A	Private, 144th N. Y. Vols., May 18, 1862; Corporal, July 17, 1862; honorably discharged Aug. 25, 1865.	Private, 14th Regt., Feb. 10, 1866; Corporal, March 14, 1866; First Sergeant, June 5, 1866; Second Lieutenant, March 24, 1873; First Lieutenant, May 15, 1878; Captain, Co. A, Jan. 10, 1884.	.....
William F. Morris, April 24, 1884.....	K	.....	Private, 13th Regt., June 4, 1876; Sergeant, Oct. 4, 1877; First Sergeant, Sept. 10, 1878; First Lieutenant, 14th Regt., April 27, 1881; Captain, April 24, 1884.	Eng.
James M. White, June 3, 1884.....	B	.....	Private, 14th Regt., May 19, 1870; Sergeant, April 10, 1873; First Lieutenant, Sept. 2, 1879; Captain, June 3, 1884.	N. Y.
John Cutts, Feb. 19, 1886.....	H	Private, 14th N. Y. S. Militia (84th N. Y. Vols.), April 18, 1861; discharged June 6, 1864.	Private, 14th Regt., April 18, 1861; Corporal, April 15, 1866; Sergeant, Dec. 18, 1868; First Lieutenant, Dec. 17, 1872; Captain, Feb. 19, 1886.	Eng.
Austin O. Crane, Aug. 15, 1887.....	I	.....	Private, Co. I, 14th Regt., Nov. 12, 1873; Corporal, Aug. 8, 1876; First Sergeant, May 8, 1878; honorably discharged, Dec. 6, 1880; reënlisted same date; First Sergeant, May 14, 1883; Second Lieutenant, April 30, 1884; First Lieutenant, June 10, 1885; Captain, Aug. 15, 1887.	N. Y.
Edward Bennett, Sept. 22, 1887.....	G	.....	Private, Co. G, 14th Regt., Feb. 19, 1879; Sergeant, April 9, 1880; First Lieutenant, Jan. 21, 1884; Captain, April 20, 1885; resigned May 20, 1886; Captain, Co. G, Sept. 22, 1887.	Swe.

Hassell Nutt, Oct. 10, 1887.....	D	.....	Private, 14th Regt., April 2, 1873; Second Lieutenant, June 17, 1874; First Lieutenant, Co. I, May 26, 1876; Adjutant, May 1, 1885; Commissary of Subsistence, Oct. 13, 1886, with original rank; Captain, Co. D, Oct. 10, 1887.	Eng.
Thomas D. Henry, April 30, 1888	F	.....	Private, Co. F, 14th Regt., May 2, 1879; Second Lieutenant, March 18, 1885; Captain, April 30, 1888.	Ire.
John H. Curran, May 26, 1882.....	E	.....	Private, Co. E, 14th Regt., June 11, 1880; Corporal, Dec. 10, 1880; First Lieutenant, May 26, 1882.	N. Y.
George H. Rice, July 24, 1884.....	A	Corporal, Co. A, 84th N. Y. Vols. (14th Militia), April 24, 1861; Sergeant, June 13, 1861; discharged for disability Dec. 30, 1862.	Private, Co. A, 14th Regt. Militia, Nov. 12, 1860; Corporal, April 24, 1861; Sergeant, June 13, 1861; discharged Dec. 30, 1862; First Lieutenant, Co. A, 14th Regt., July 24, 1884.	Eng.
Adolph L. Kline, March 16, 1885.....	D	.....	Private, 14th Regt., May 24, 1876; Corporal, Sept. 13, 1878; Quartermaster-Sergeant, Dec. 1, 1881; Second Lieutenant, Jan. 23, 1882; First Lieutenant, March 16, 1885.	N. J.
William R. Owens, May 7, 1886.....	H	.....	Private, Co. H, 14th Regt., June 29, 1870; Corporal, March 11, 1873; Sergeant, Jan. 14, 1876; Second Lieutenant, June 13, 1884; First Lieutenant, May 7, 1886.	N. Y.
Peter E. Erickson, Sept. 29, 1887.....	G	.....	First Lieutenant, Co. G, 14th Regt., Sept. 29, 1887.	Swe.
Charles C. Wallace, Jan. 4, 1888.....	I	.....	Private, Co. I, 14th Regt., March 3, 1885; Corporal, June 10, 1885; Sergeant, Dec. 7, 1885; Second Lieutenant, Jan. 20, 1886; First Lieutenant, Jan. 4, 1888.	N. Y.
Neil B. McBride, May 29, 1888	F	.....	Private, Co. K, 14th Regt., April 30, 1879; Sergeant, June 13, 1882; discharged Sept. 17, 1882; First Lieutenant, Co. F, May 29, 1888.	Scot.
Charles W. Bridges, Dec. 3, 1888.....	K	.....	Private, Co. K, 14th Regt., Jan. 14, 1878; Corporal, Dec. 12, 1879; Sergeant, Jan. 3, 1881; First Sergeant, Oct. 21, 1881; discharged Jan. 7, 1884; reënlisted Feb. 4, 1886; First Sergeant, May 3, 1886; discharged March 7, 1887; Second Lieutenant, Oct. 17, 1877; First Lieutenant, Dec. 3, 1888.	N. Y.

INFANTRY — FOURTEENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenants.</i> Gilbert Lloyd, Oct. 16, 1885.....	C	.....	Private, Co. B, 23d Regt., July 12, 1876; Corporal, April 3, 1878; Private, Co. D, 23d Regt., June 24, 1878; discharged Oct. 31, 1881; Second Lieutenant, Co. E, 14th Regt., Oct. 16, 1885; transferred to Co. C, April 18, 1888.	N. Y.
John O. Soderstrom, Sept. 29, 1887....	G	.....	Private, Co. G, 14th Regt., Feb. 18, 1873; Corporal, March 15, 1874; Sergeant, June 23, 1875; First Sergeant, March 9, 1876; discharged March 24, 1884; Second Lieutenant, Co. G, 14th Regt., Sept. 29, 1887.	.....
William C. Noble, Jan. 5, 1888.....	A	.....	Private, Co. A, 14th Regt., May 12, 1876; Ordnance Sergeant, 14th Regt., Oct. 4, 1878; Sergeant-Major, 65th Regt., Jan. 14, 1880; taken up from dropped in Co. A, 14th Regt., Dec. 15, 1881; Sergeant, Feb. 13, 1882; First Sergeant, May 26, 1884; Sergeant-Major, 13th Regt., October 20, 1886; Second Lieutenant, Co. A, Jan. 5, 1888.	N. Y.
Edward W. Castell, Jan. 30, 1888.....	D	.....	Private, Co. D, 14th Regt., May 8, 1865; honorably discharged, Nov. 18, 1878; Private, Co. D, Dec. 17, 1878; Sergeant, Dec. 12, 1879; First Sergeant, Nov. 8, 1886; Second Lieutenant, Jan. 30, 1888.	N. Y.
Edward A. Anderson, March 21, 1888.	I	.....	Private, Co. D, 14th Regt., Aug. 29, 1879; Commissary Sergeant, 14th Regt., Sept. 11, 1879; returned to the ranks Dec. 7, 1883, and transferred to Co. I; First Sergeant, June 2, 1884; honorably discharged Nov. 1, 1886; reenlisted Nov. 16, 1887; Second Lieutenant, March 21, 1888.	N. Y.

Harry J. McDermott, May 15, 1888....	B	Private, Co. K, 14th Regt., May 13, 1886; Sergeant, April 4, 1888; Second Lieutenant, Co. B, May 15, 1888.	N. Y.
Patrick F. McLaughlin, July 16, 1888. E	E	Private, Co. K, 14th Regt., March 13, 1886; Second Lieutenant, Co. E, July 16, 1888.	N. Y.

TWENTY-SECOND REGIMENT—(Ten Companies).

First Brigade.

Armory, Fourteenth street, between Sixth and Seventh avenues, New York City.

John T. Camp, Jan. 18, 1886.....	Colonel.	As Sergeant, 22d N. G., S. N. Y., from May 28 to Sept. 5, 1862; Sergeant and First Lieutenant, 22d N. G., S. N. Y., from June 18 to July 24, 1863.	Mass.
George Alfred Miller, July 30, 1888.	Lieutenant-Colonel.	Private, Co. B, 22d Regt., Nov. 11, 1861; Sergeant, Dec. 9, 1861; First Lieutenant, June 27, 1863; Captain, March 25, 1867; Major 22d Regt., Feb. 11, 1869; Lieutenant Colonel, Oct. 11, 1869; honorably discharged Feb. 28, 1871; Lieutenant-Colonel, Dec. 22, 1873; Colonel, Jan. 18, 1886.	N. Y.
William V. King, Nov. 19, 1888.	Major.	Private, Co. A, 22d Regt., Feb. 28, 1873; Corporal, Sept. 28, 1874; Sergeant, April 10, 1876; Second Lieutenant, March 14, 1881; Captain; May 2, 1881; Major, March 3, 1886; Lieutenant-Colonel, July 30, 1888.	N. Y.
William B. Smith, Sept. 8, 1886.	Adjutant—First Lieutenant.	Private, 22d Regt., May 28, 1862; discharged Sept. 5, 1862; First Lieutenant, 12th Regt., April 1, 1879; Captain, Nov. 28, 1881; transferred to Co. B, 22d Regt., May 7, 1883; Major, 22d Regt., Nov. 19, 1888.	N. Y.
Thomas L. Miller, April 26, 1878.	Quartermaster—First Lieutenant.	Private, Co. E, 22d Regt., June 7, 1875; Sergeant Feb. 26, 1877; First Sergeant, Feb. 18, 1880; Second Lieutenant, Oct. 20, 1880; First Lieutenant and Adjutant, Sept. 8, 1886.	N. Y.
		Private, Co. E, 22d Regt., Dec. 2, 1867; Corporal, May 10, 1871; Sergeant, May 13, 1872; Second Lieutenant, Feb. 11, 1874; First Lieutenant, Oct. 14, 1874; honorably discharged Nov. 30, 1877; Quartermaster, April 26, 1878.	N. Y.

INFANTRY — TWENTY-SECOND REGIMENT — (Continued).

NAME. GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Commissary of Subsistence—First Lieutenant.</i>				
Joseph M. Smith, July 7, 1887.....	.....	.....	Private, Co. E, 22d Regt., March 5, 1877; Corporal, Feb. 18, 1881; Sergeant, March 28, 1884; Company Quartermaster-Sergeant, April 1, 1886; Regimental Quartermaster-Sergeant, Aug. 23, 1886; Commissary of Subsistence, July 7, 1887.	N. Y.
<i>Surgeon—Major.</i>				
William R. Pryor, Oct. 29, 1888.....	.....	.....	Captain and Assistant Surgeon, 71st Regt., Oct. 1, 1887; Major and Surgeon, 22d Regt., Oct. 29, 1888.	Va.
<i>Assistant Surgeon—Captain.</i>				
Harry Marion Sims, May 21, 1884.....	.....	Assistant Surgeon, 11th Field Ambulance Corps Société de Secours aux Blessés, French Army, Franco-Prussian campaign, 1870.	Assistant Surgeon, 22d Regt., May 12, 1876; removed from district, May 9, 1878; Assistant Surgeon, 22d Regt., Dec. 13, 1880; Captain and Assistant Surgeon, May 21, 1884.	N. Y.
<i>Chaplain—Captain.</i>				
William N. Dunnell, April 15, 1874.....	.....	.....	Chaplain, 22d Regt., April 15, 1874.....	N. Y.
<i>Inspector of Rifle Practice—Captain.</i>				
.....
<i>Captains.</i>				
George E. B. Hart, March 28, 1884. . .	K	.....	Private, Co. K, 22d Regt., Dec. 19, 1879; Corporal, April 20, 1881; Second Lieutenant, 71st Regt., Jan. 27, 1882; resigned June 10, 1882; Private, 22d Regt., July 24, 1882; First Lieutenant, Nov. 15, 1882; Captain, March 28, 1884.	N. Y.

George Francis Demarest, Nov. 3, 1884.	G	Private, Co. A, 22d Regt., Feb., 1873; Corporal, March 19, 1874; Sergeant, Sept. 28, 1874; Second Lieutenant, June 1, 1876; Captain, March 11, 1878; discharged Oct. 12, 1880; Captain, Co. G, Nov. 3, 1884.	N. Y.
John P. Leo, Feb. 18, 1885.	I	Private, Co. H, 22d Regt., May 31, 1877; Sergeant, May 7, 1878; First Sergeant, Dec. 30, 1878; Second Lieutenant, Co. F, 71st Regt., April 13, 1881; First Lieutenant, Co. H, Dec. 6, 1881; Captain, Co. C, Nov. 3, 1882; Captain, 22d Regt., Feb. 18, 1885.	N. Y.
William E. Preece, April 2, 1886.	A	Private, Co. A, 22d Regt., Jan. 21, 1870; Corporal, Dec. 12, 1870; Sergeant, March 21, 1873; First Sergeant, March 19, 1874; First Lieutenant, Dec. 18, 1882; Captain, April 2, 1886.	N. Y.
Nathaniel B. Thurston, Dec. 20, 1886.	E	Private, Co. E, 22d Regt., Aug. 6, 1877; Corporal, April 3, 1878; First Sergeant, Feb. 20, 1879; Second Lieutenant, Feb. 11, 1880; First Lieutenant, April 6, 1880; Captain, Dec. 20, 1886.	N. Y.
Charles A. DuBois, Feb. 10, 1888.	F	Private, Co. E, 22d Regt., June 28, 1882; Quartermaster-Sergeant, 22d Regt., June 8, 1885; Second Lieutenant, Co. I, Oct. 12, 1885; Captain, Co. F, Feb. 10, 1888.	N. Y.
John G. R. Lilliendahl, Jan. 25, 1888.	C	Private, Co. E, 22d Regt., May 5, 1880; Corporal, Jan. 19, 1881; Sergeant, Sept. 12, 1881; First Lieutenant, Co. I, Oct. 12, 1885; Captain, Co. C, Jan. 25, 1888.	N. Y.
James Wells Finch, Dec. 3, 1888.	H	Second Lieutenant, Co. C, 22d Regt., Sept. 30, 1885; Captain and Inspector of Rifle Practice, 22d Regt., May 16, 1887; Captain, Co. H, 22d Regt., Dec. 3, 1888.	N. Y.
William J. Maidhoff, Nov. 22, 1880.	B	Private, Co. G, 22d Regt., Nov. 6, 1871; Commissary Sergeant, 22d Regt., June 1, 1875; Sergeant-Major, Dec. 8, 1876; First Lieutenant, Nov. 22, 1880.	N. Y.
Norman MacDonald, Nov. 12, 1883.	C	First Lieutenant, Co. C, 22d Regt., Nov. 12, 1883.	N. Y.

INFANTRY — TWENTH-SECOND REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants—(Continued).</i>				
Harry A. Beneke, March 28, 1884.....	K	.....	Private, Co. B, 22d Regt., Nov. 15, 1880; Corporal, Dec. 12, 1881; Sergeant, Jan. 17, 1883; First Lieutenant, Co. K, March 28, 1884.	N. Y.
James O'Neill, April 6, 1886.....	D	.....	Private, Co. D, 22d Regt., Oct. 6, 1876; Corporal, Dec. 10, 1878; Sergeant, April 24, 1882; Second Lieutenant, Dec. 19, 1884; First Lieutenant, April 6, 1886.	N. Y.
John A. Quigley, May 4, 1887.....	E	.....	Private, Co. E, 22d Regt., April 6, 1883; Corporal, Sept. 22, 1884; Sergeant, Jan. 27, 1886; First Sergeant, Jan. 25, 1887; First Lieutenant, May 4, 1887.	N. Y.
James P. Kenworthy, May 6, 1887.....	A	.....	Private, Co. A, 22d Regt., Sept. 7, 1874; Corporal, Feb. 26, 1877; Sergeant, Feb. 24, 1879; First Sergeant, Feb. 28, 1883; First Lieutenant, May 6, 1887.	N. Y.
Charles H. Rockwell, March 23, 1888.	I	.....	Private, Co. I, 22d Regt., Dec. 1, 1882; Sergeant, April 23, 1883; First Sergeant, Nov. 23, 1885; First Lieutenant, March 23, 1888.	Mass.
Walter S. Bennett, April 6, 1888.....	F	.....	Private, Co. F, 22d Regt., Sept. 20, 1875; Corporal, June 14, 1878; Sergeant, Jan. 21, 1881; First Sergeant, Feb. 20, 1885; First Lieutenant, April 6, 1888.	N. Y.
Edwin W. Dayton, April 9, 1888.....	G	.....	Private, Co. G, 22d Regt., April 21, 1884; Corporal, May 25, 1885; Sergeant, April 1, 1886; First Sergeant, Sept. 20, 1887; First Lieutenant, April 9, 1888.	N. Y.

Second Lieutenants.

H	Adolph E. Dick, April 20, 1881.....	Private, Co. B, 184th N. Y. Vols., July 22, 1864; honorably discharged June 7, 1865.	Drummer, Oswego Light Guard, late 48th N. G., S. N. Y., May 1, 1861; dropped July, 1864; Private, 49th Regt., 1873; dropped July, 1874; Private, Co. C, 22d Regt., May 1, 1875; Second Lieutenant, April 20, 1881; transferred to Co. H, Dec. 27, 1885.	Ger.
K	Robert J. Daly, April 8, 1886.....	.....	Private, Co. K, 22d Regt., Oct. 4, 1881; Sergeant, Jan. 17, 1883; First Sergeant, Dec. 28, 1885; Second Lieutenant, April 8, 1886.	Ire.
D	Ellsworth R. Debow, Nov. 9, 1886.....	.....	Private, Co. D, 22d Regt., Oct. 7, 1879; Corporal, Feb. 20, 1885; Quartermaster-Sergeant, Sept. 6, 1885; Second Lieutenant, Nov. 9, 1885.	N. Y.
B	William N. Bavier, Nov. 22, 1886.....	.....	Private, Co. B, 22d Regt., Nov. 6, 1876; First Sergeant, Dec. 12, 1881; discharged Nov. 23, 1885; Private, Co. B, 22d Regt., Nov. 24, 1885; Sergeant, Nov. 25, 1885; Second Lieutenant, Nov. 22, 1886.	N. Y.
E	Walter D. Haws, Dec. 20, 1886.....	.....	Private, Co. E, 22d Regt., Dec. 6, 1882; Sergeant, June 15, 1886; Second Lieutenant, Dec. 20, 1886.	N. Y.
A	John Lamb, Dec. 27, 1886.....	.....	Private, Co. K, 22d Regt., Nov. 23, 1880; Quartermaster-Sergeant, June 9, 1882; returned to the ranks June 15, 1883; Corporal, June 15, 1884; Sergeant, Dec. 4, 1884; discharged Nov. 22, 1886; Second Lieutenant, 22d Regt., Dec. 27, 1886.	N. Y.
C	Malcolm C. Murray, July 11, 1887.....	.....	Private, Co. C, 22d Regt., April 7, 1884; First Sergeant, Nov. 23, 1885; Second Lieutenant, July 11, 1887.	N. Y.
I	Charles E. Crane, March 23, 1888.....	.....	Private, Co. I, 22d Regt., Nov. 8, 1886; Second Lieutenant, March 23, 1888.	N. Y.
F	William J. Hussey, April 6, 1888.....	.....	Private, Co. F, 22d Regt., Oct. 12, 1886; Second Lieutenant, April 6, 1888.	Pa.
G	Samuel F. Ball, May 7, 1888.....	.....	Private, Co. G, 22d Regt., Dec. 17, 1883; Corporal, Jan. 27, 1885; Sergeant, May 27, 1887.	N. Y.

INFANTRY — (Continued).

TWENTY-THIRD REGIMENT — (Ten Companies).

Second Brigade.

Armory, *Clermont avenue, near Myrtle avenue, Brooklyn.*

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Colonel.</i> John N. Partridge, Oct. 17, 1887.....	Private, 2d Battalion Mass. Vol. Militia, March, 1861; First Lieutenant, 24th Mass. Vol. Infantry, Sept. 2, 1861; Captain, Feb. 6, 1864, honorably discharged Sept. 27, 1864.	First Lieutenant, Co. H, 23d Regt., Feb. 10, 1869; Captain, Co. K, Oct. 22, 1869; Major, Jan. 7, 1871; honorably discharged March 16, 1875; Commissary of Subsistence, 22d Regt., May 10, 1875; Major, June 14, 1875; Lieutenant-Colonel, June 26, 1876; Colonel, Jan. 10, 1880; honorably discharged Feb. 15, 1882; Colonel, Oct. 17, 1887.	.....
<i>Lieutenant-Colonel.</i> Alexis C. Smith, Dec. 5, 1887.....	Private, Co. A, 23d Regt., March 1, 1876; Corporal, Sept. 4, 1878; Sergeant, June 4, 1879; First Sergeant, Co. H, Sept. 4, 1879; First Lieutenant, March 5, 1880; Captain, Co. H, Oct. 16, 1882; Lieutenant-Colonel, 23d Regt., Dec. 5, 1887.	N. Y.
<i>Major.</i> Charles E. Waters, April 19, 1886.....	Private, 23d Regt., Jan. 7, 1874; Corporal, March 1, 1875; Sergeant, May 15, 1876; First Sergeant, Aug. 7, 1878; First Lieutenant, May 6, 1879; Captain, Co. K, March 4, 1880; Major, April 19, 1886.	N. Y.
<i>Adjutant—First Lieutenant.</i> Theodore W. Sillcocks, Jan. 25, 1888.	Private, Co. G, 23d Regt., Oct. 4, 1880; Corporal, Jan. 6, 1882; Sergeant, Dec. 5, 1884; Second Lieutenant, March 13, 1885; First Lieutenant and Adjutant, Jan. 25, 1888.	N. Y.

<i>Quartermaster—First Lieutenant.</i> Arthur A. Thompson, Sept. 18, 1882.....	Private, 23d Regt., Sept. 3, 1877; Left General Guide, July 3, 1879; Right General Guide, Sept. 6, 1880; First Lieutenant and Quartermaster, Sept. 18, 1882.	Mass.
<i>Commissary of Subsistence—First Lieutenant.</i> Richard Oliver, May 12, 1884.....	Private, Co. G, 7th Regt., April 19 to June 3, 1861; Second Lieutenant, Co. E, 13th Regt., May 24, 1862, to May 20, 1865; Commissary of Subsistence, 23d Regt., May 12, 1884.	Eng.
<i>Surgeon—Major.</i> William E. Spencer, Nov. 28, 1887.....	Private, Co. D, 23d Regt., June 12, 1879; Hospital Steward, Oct. 24, 1881; Captain and Assistant Surgeon, April 26, 1886; Major and Surgeon, Nov. 28, 1887.	Pa.
<i>Assistant Surgeon—Captain.</i> Henry L. Cochran, Nov. 28, 1887.....	Private, Co. A, 23d Regt., Nov. 16, 1881; Hospital Steward, 23d Regt., May 19, 1886; Captain and Assistant Surgeon, Nov. 28, 1887.	N. Y.
<i>Chaplain—Captain.</i> Robert R. Meredith, Nov. 26, 1888.....	Captain and Chaplain, 23d Regt., Nov. 26, 1888....	Ire.
<i>Inspector of Rifle Practice—Captain.</i> Heywood C. Broun, Jan. 3, 1888.....	Private, Co. F, 23d Regt., April 2, 1872; transferred to Co. D, April 10, 1879; Major and Inspector of Rifle Practice, 3d Brigade, Dec. 8, 1884; Supernumerary, Aug. 5, 1886; Captain and Inspector of Rifle Practice, 23d Regt., Jan. 3, 1888.	Eng.
<i>Captains.</i> Ezra De Forest, Jan. 29, 1883..... C	Private, 23d Regt., Oct. 19, 1872; Corporal, March 2, 1874; Sergeant, Feb. 28, 1876; First Sergeant, Dec. 4, 1876; First Lieutenant, April 14, 1879; Captain, Jan. 29, 1883.	Conn.
Willard L. Candee, Oct. 17, 1883..... B	Private, 23d Regt., June 21, 1875; Sergeant, Co. C, Jan. 8, 1877; First Sergeant, May 5, 1879; Second Lieutenant, Co. B, April 4, 1880; First Lieutenant, Dec. 13, 1882; Captain, Co. B, Oct. 17, 1883.	N. Y.
Frederick L. Holmes, June 3, 1885..... I	Private, Co. B, 23d Regt., April 24, 1879; Second Lieutenant, Nov. 12, 1879; First Lieutenant, March 10, 1880; resigned Nov. 15, 1882; Second Lieutenant, Dec. 10, 1884; First Lieutenant and Adjutant, March 21, 1885; Captain, Co. I, June 3, 1885.	Ohio.

INFANTRY — TWENTY-THIRD REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Britton C. Thorn, March 30, 1886 . . .	F	.....	Private, Co. F, 23d Regt., Oct. 5, 1875; Corporal, Dec. 2, 1879; Sergeant, Jan. 10, 1882; First Sergeant, June 6, 1882; First Lieutenant, Nov. 18, 1884; Captain, March 30, 1886.	N. Y.
Darwin R. Aldridge, Sept. 2, 1886 . . .	K	.....	Private, 23d Regt., July 11, 1878; Corporal, Oct. 20, 1879; Second Lieutenant, Co. K, Dec. 29, 1881; First Lieutenant, Jan. 17, 1884; Captain, Sept. 2, 1886.	N. J.
Charles F. Guyon, May 12, 1887	E	.....	Private, Co. G, 23d Regt., July 4, 1874; Corporal, Dec. 1, 1875; Sergeant, Dec. 5, 1879; Captain and Aide-de-Camp, 4th Brigade, Oct. 20, 1884; Major and Commissary of Subsistence, Jan. 5, 1885; Major and Inspector, April 21, 1886; rendered Supernumerary, Aug. 5, 1886; Captain, Co. E, 23d Regt., May 12, 1887.	N. Y.
Henry C. Everdell, Dec. 14, 1887	A	.....	Private, Co. A, 23d Regt., June 25, 1879; Corporal, April 7, 1880; Sergeant, Feb. 8, 1882; First Lieutenant, Feb. 19, 1886; Captain, Dec. 14, 1887.	N. Y.
Arthur C. Saunders, March 9, 1888 . . .	H	.....	Private, Co. D, 23d Regt., Jan. 17, 1876; Corporal, May 9, 1878; Sergeant, Aug. 12, 1880; Second Lieutenant, Feb. 9, 1885; First Lieutenant, Co. K, Jan. 17, 1887; Captain, Co. H, March 9, 1888.	N. Y.
John S. Shepherd, Aug. 20, 1888	D	.....	Private, 23d Regt., Sept. 12, 1878; Corporal, April 7, 1879; Sergeant, Feb. 20, 1882; Second Lieutenant, Co. D, Dec. 11, 1882; First Lieutenant, Feb. 9, 1885; Captain, Aug. 20, 1888.	Mass.

<i>First Lieutenants.</i> George E. Hall, March 13, 1885	G	.....	Private, Co. G, 23d Regt., Oct. 14, 1881; Corporal, Dec. 7, 1883; Sergeant, Dec. 5, 1884; Second Lieutenant, 23d Regt., Jan. 2, 1885; First Lieutenant, March 13, 1885.	N. H.
William S. Banta, Nov. 16, 1885	C	.....	Private, 23d Regt., July 13, 1874; Corporal, Jan. 8, 1877; Sergeant, May 5, 1879; First Sergeant, Aug. 2, 1880; Second Lieutenant, Co. C, Jan. 29, 1883; First Lieutenant, Nov. 16, 1885.	N. Y.
G. W. Middleton, Jr., Jan. 21, 1886	I	.....	Private, Co. I, 23d Regt., March 30, 1882; Corporal, Nov. 2, 1882; Second Lieutenant, March 3, 1884; First Lieutenant, Jan. 21, 1886.	N. Y.
Joseph T. Hull, June 7, 1886	F	.....	Private, 23d Regt., June 11, 1867; Corporal, Co. I, July 6, 1869; Sergeant, March 7, 1871; First Sergeant, Nov. 7, 1871; transferred to Co. F, Oct. 20, 1874; Sergeant, Dec. 1, 1874; discharged April 23, 1877; Second Lieutenant, March 17, 1885; First Lieutenant, June 7, 1886.	N. Y.
Wm. Passmore Pickett, May 2, 1887	B	.....	Private, Co. B, 23d Regt., March 5, 1880; discharged March 30, 1885; Second Lieutenant, Co. B, 23d Regt., Oct. 7, 1885; First Lieutenant, May 2, 1887.	Conn.
George A. Williams, July 11, 1887	H	.....	Private, Co. H, 23d Regt.; Company Quartermaster-Sergeant, Oct. 30, 1882; Sergeant, Dec. 21, 1883; First Sergeant, Dec. 15, 1884; Second Lieutenant, Dec. 18, 1885; First Lieutenant, July 11, 1887.	N. Y.
William H. B. Smith, Feb. 1, 1888	A	.....	Private, Co. A, 23d Regt., May 30, 1881; Corporal, May 15, 1882; Sergeant, Dec. 19, 1883; First Sergeant, Sept. 3, 1884; Second Lieutenant, Feb. 19, 1886; First Lieutenant, Feb. 1, 1888.	N. Y.
David K. Case, May 14, 1888	K	.....	Private, Co. K, 23d Regt., April 14, 1881; Corporal, Oct. 12, 1882; Sergeant, Nov. 15, 1883; First Sergeant, April 3, 1884; Second Lieutenant, Jan. 17, 1887; First Lieutenant, May 14, 1888.	N. Y.

INFANTRY — TWENTY-THIRD REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants—(Continued).</i>				
Eliphalet Hendrickson, Sept. 11, 1888.	E	With 13th Militia, from April 23 to Sept., 1861; Private, 87th N. Y. Vols., Sept. 12, 1861; transferred to 40th N. Y. Vols.; Sergeant; reënlisted in the field as a veteran Feb. 28, 1864; Second Lieutenant, Dec. 19, 1863; First Lieutenant, and Adjutant, Oct. 8, 1864; honorably discharged June 27, 1865.	First Lieutenant, Co. E, 23d Regt., Sept. 11, 1888.	N. Y.
Edward J. Kraft, Oct. 1, 1888	D	.....	Private, Co. D, 23d Regt., Jan. 10, 1878; Corporal, April 7, 1879; Sergeant, Nov. 9, 1882; First Sergeant, Nov. 3, 1884; Second Lieutenant, March 7, 1887; First Lieutenant, Oct. 1, 1888.	N. Y.
<i>Second Lieutenants.</i>				
Chas. R. Silkman, Jan. 18, 1886.....	C	.....	Private, Co. C, 23d Regt., Feb. 20, 1882; Corporal, Dec. 18, 1882; Sergeant, June 1, 1885; Second Lieutenant, Jan. 18, 1886.	N. Y.
George F. Hamlin, Jan. 21, 1886.....	I	.....	Private, Co. K, 23d Regt., Sept. 29, 1881; Corporal, Dec. 7, 1882; Private, Oct. 15, 1883; transferred to Co. I, March 12, 1884; First Sergeant, April 15, 1884; Second Lieutenant, Jan. 21, 1886.	.....
Robert T. Holly, Sept. 13, 1886.....	F	.....	Private, Co. F, 23d Regt., Sept. 2, 1873; Corporal, March 22, 1876; Private, Dec. 6, 1880; Second Lieutenant, Sept. 13, 1886.	Conn.
Thomas M. Close, May 11, 1887	B	.....	Private, Co. B, 23d Regt., Dec. 21, 1879; Corporal, Jan. 26, 1881; Sergeant, May 18, 1885; Second Lieutenant, May 11, 1887.	N. Y.

Clarence E. Hubbard, July 11, 1887.....	H	Private, Co. H, 23d Regt., June 23, 1879; Corporal, Nov. 2, 1883; Sergeant, Oct. 3, 1884; First Sergeant, Jan. 15, 1886; Second Lieutenant, July 11, 1887.	Conn.
Edward Morris, Feb. 1, 1888.....	A	Private, 23d Regt., Dec. 1, 1880; promoted Corporal, Nov. 15, 1882; Sergeant, Feb. 4, 1885; Second Lieutenant, Feb. 1, 1888.	N. Y.
William M. Despard, Feb. 10, 1888.....	G	Private, Co. G, 23d Regt., May 24, 1880; Corporal, June 2, 1882; Sergeant, Feb. 6, 1883; First Sergeant, April 15, 1887; Second Lieutenant, Feb. 10, 1888.	N. Y.
William T. Colyer, Sept. 11, 1888.....	E	Private, 23d Regt., March 14, 1882; Corporal, Feb. 3, 1885; Sergeant, March 23, 1886; First Sergeant, Nov. 21, 1887; Second Lieutenant, Sept. 11, 1888.	N. Y.
Frederick A. Croker, Oct. 18, 1888.....	K	Private, Co. K, 23d Regt., Sept. 6, 1883; Corporal, Dec. 4, 1884; Sergeant, June 14, 1888; Second Lieutenant, Oct. 18, 1888.	N. Y.
George C. Miller, Nov. 26, 1888.....	D	.....	.....

THIRTY-SECOND REGIMENT — (Nine Companies).

Second Brigade.

Armory, Corner Bushwick boulevard and Stagg street, Brooklyn.

Louis Finkelmeier, Oct. 8, 1881.....	Colonel.	Private, Co. B, 20th N. Y. Vols.; Corporal and Sergeant; First Sergeant, Dec. 26, 1862; discharged, expiration of service, June 1, 1863.	Ger.
Henry C. Clark, Feb. 24, 1888.....	Lieutenant-Colonel.	.....	N. H.
Edward Verdeckberg, Jan. 6, 1888.....	Major.	Second Lieutenant, 13th Regt., May 20, 1884; First Lieutenant, June 11, 1885; Adjutant, June 11, 1885; resigned Oct. 19, 1887; Lieutenant-Colonel, 32d Regt., Feb. 24, 1888.	N. Y.
		Private, Co. H, 47th Regt., April 3, 1878; First Lieutenant, Co. D, 32d Regt., Nov. 18, 1881; Captain, March 31, 1882; Major, 32d Regt., Jan. 6, 1888.	

INFANTRY — THIRTY-SECOND REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Adjutant—First Lieutenant.</i> Wm. Van der Clute, Jr., Feb. 15, 1884	Private, Co. I, 32d Regt., March 16, 1877; First Sergeant, Oct. 1, 1877; discharged April 7, 1882; First Sergeant, April 7, 1882; discharged April 7, 1883; reënlisted and reappointed First Sergeant, April 7, 1883; Adjutant, 32d Regt., Feb. 15, 1884.	N. Y.
<i>Quartermaster—First Lieutenant.</i> * Jacob R. Teel, April 8, 1887	Private, Co. E, 13th Regt., Sept. 25, 1885; Quartermaster-Sergeant, Dec. 30, 1885; First Lieutenant and Quartermaster, 32d Regt., April 8, 1887.	N. J.
<i>Commissary of Subsistence—First Lieutenant.</i> George Zechiel, Jan. 26, 1885	First Lieutenant and Commissary of Subsistence, 32d Regt., Jan. 26, 1885.	N. Y.
<i>Surgeon—Major.</i> John F. Valentine, April 23, 1883	First Lieutenant and Assistant Surgeon, 32d Regt., July 26, 1879; Captain and Surgeon, April 12, 1882; Major and Surgeon, April 23, 1883.	N. Y.
<i>Assistant Surgeon—Captain.</i> Frederick G. Winter, May 7, 1886	Captain and Assistant Surgeon, 32d Regt., May 7, 1886.	Me.
<i>Chaplain—Captain.</i> Emil Arnold Meury, Sept. 30, 1887	Chaplain, 32d Regt., Sept. 30, 1887	.....
<i>Inspector of Rifle Practice—Captain.</i> Van D. Macumber, April 25, 1887	Second Lieutenant, 13th Regt., Nov. 28, 1886; Captain and Inspector of Rifle Practice, 32d Regt., April 25, 1887; Private, Co. E, 13th Regt., June 18, 1885; First Sergeant, June 18, 1885; Second Lieutenant, Nov. 26, 1886; Captain and Inspector of Rifle Practice, 32d Regt., April 25, 1887.	Ohio.

<i>Captains.</i>				
Charles Waage, March 29, 1876; Brevet Major, Dec. 4, 1879.....	F	Private, Co. A, 47th N. Y. Vols., Sept. 10, 1861; prisoner of war; honorably discharged Feb. 15, 1865.	Second Lieutenant, 52d Regt., June 20, 1866; disbanded June 5, 1868; Second Lieutenant, 32d Battalion, Sept. 11, 1868; First Lieutenant, 32d Regt., Sept. 16, 1870; Captain, March 29, 1876.	Ger.
George H. Bishop, Dec. 23, 1884.....	A	.....	Private, Co. F, 47th Regt., Aug. 7, 1871; Corporal, March 1, 1875; Sergeant, Jan. 7, 1878; Private, Aug. 7, 1878; First Sergeant, March 3, 1879; discharged Dec. 20, 1881; Private, July 27, 1882; discharged Dec. 5, 1883; Captain, Co. A, Dec. 23, 1884.	N. Y.
John J. Klein, Oct. 29, 1886.....	G	.....	Private, Co. G, 32d Regt., June 12, 1875; Company Quartermaster-Sergeant, March 1, 1876; First Sergeant, Nov. 16, 1878; Second Lieutenant, Feb. 3, 1879; First Lieutenant, Oct. 29, 1881; Captain, Oct. 29, 1886.	N. Y.
Edward J. Renison, Aug. 9, 1887.....	B	.....	Private, Co. E, 13th Regt., Dec., 1879; Corporal, May, 1883; Sergeant, Oct., 1885; First Lieutenant, Co. D, 32d Regt., April 30, 1886; Captain, Co. B, Aug. 9, 1887.	N. Y.
Edward J. McGlynn, Feb. 29, 1888.....	D	.....	Private, Co. A, 32d Regt., Dec. 3, 1883; Corporal, April 25, 1884; First Sergeant, Jan. 14, 1886; Second Lieutenant, April 16, 1886; First Lieutenant, Co. D, Oct. 18, 1887; Captain, Feb. 29, 1888.	N. Y.
Maxwell C. Burger, March 1, 1888.....	K	.....	Private, Co. K, 32d Regt., Dec. 2, 1870; discharged April 15, 1881; First Lieutenant, Feb. 10, 1885; Captain, March 1, 1888.	N. Y.
Charles C. Schoeneck, March 2, 1888.	I	.....	Private, Co. K, 13th Regt., June 6, 1879; Corporal, Jan. 2, 1880; Sergeant, Jan. 10, 1883; General Guide, Dec. 26, 1884; honorably discharged Feb. 18, 1887; First Lieutenant, Co. F., 32d Regt., Aug. 26, 1887; Captain, Co. I, March 2, 1888.	N. Y.
George D. Russell, Oct. 12, 1888.....	C	.....	Private, 49th Regt., May 27, 1867; Corporal, Jan. 22, 1874; discharged June, 1875; Second Lieutenant, Co. C, 32d Regt., Aug. 12, 1887; Captain, Oct. 12, 1888.	Mass.

INFANTRY — THIRTY-SECOND REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants.</i>				
William D. Wood, April 10, 1885	A	.....	Private, Co. A, 32d Regt., Oct. 31, 1883; Second Lieutenant, Jan. 8, 1884; First Lieutenant, April 10, 1885.	N. Y.
James H. Russell, April 27, 1886	H	.....	Private, Co. H, 32d Regt., March 24, 1882; Quartermaster-Sergeant, Oct. 19, 1883; First Sergeant, March 17, 1884; First Lieutenant, April 27, 1886.	N. Y.
John J. Elzenbeck, Feb. 23, 1887	I	.....	Private, Co. I, 32d Regt., June 19, 1877; Corporal, April 12, 1879; Sergeant, March 18, 1882; honorably discharged and reenlisted July 21, 1882; First Sergeant, April 23, 1884; Second Lieutenant, May 22, 1885; First Lieutenant, Feb. 23, 1887.	N. Y.
Robert H. McKittrick, June 24, 1887 ..	C	.....	Private, Co. E, 13th Regt., Oct. 1, 1886; Second Lieutenant, 32d Regt., April 15, 1887; First Lieutenant, June 24, 1887.	Conn.
Alexander Mitzel, Jr., May 11, 1888 ..	G	.....	Second Lieutenant, Co. G, 32d Regt., Aug. 12, 1887; First Lieutenant, May 11, 1888.	N. Y.
John Rooney, June 1, 1888	F	.....	Private, Co. A, 32d Regt., Nov. 21, 1885; Quartermaster-Sergeant, May 21, 1885; Private, Oct. 22, 1886; transferred to Co. D, Oct. 29, 1886; Corporal, Dec. 8, 1886; Private, June 17, 1887; transferred to Co. B, same day; Second Lieutenant, Aug. 9, 1887; First Lieutenant, Co. F, June 1, 1888.	Eng.
Wesley S. Maxson, Sept. 7, 1888	B	.....	Private, Co. F, 13th Regt., Aug. 7, 1881; Corporal, Dec. 4, 1883; Sergeant, July 6, 1885; First Lieutenant, Co. B, 32d Regt., Sept. 7, 1888.	N. Y.
<i>Second Lieutenants.</i>				
William Luthy, Dec. 4, 1885	H	.....	Private, Co. H, 32d Regt., Aug. 12, 1884; Sergeant, May 19, 1885; Second Lieutenant, Dec. 4, 1885.	N. J.

William Finkelmeier, Oct. 18, 1887....	D	.....	Private, 32d Regt., Dec. 1, 1882; Corporal, Aug. 19, 1883; Sergeant, June 23, 1884; First Sergeant, Nov. 27, 1885; Second Lieutenant, Oct. 18, 1887.	N. Y.
Leon R. Wood, March 2, 1888	A	.....	Private, Co. A, 32d Regt., Oct. 23, 1883; Sergeant, Dec. 19, 1884; First Sergeant, June 21, 1886; Second Lieutenant, Co. I, March 2, 1888; transferred to Co. A, Dec. 29, 1888.	N. Y.
John A. Jochum, Aug. 10, 1888..	G	.....	Private, 13th Regt., May 22, 1880; transferred to 3d Battery, May 17, 1884; Corporal, Dec. 29, 1884; honorably discharged Feb. 14, 1888; Second Lieutenant, 32d Regt., Aug. 10, 1888.	N. Y.
Emil Magnus, Jr., Sept. 21, 1888.....	F	.....	Private, Co. D, 23d Regt., Oct. 7, 1878; discharged March 17, 1884; Second Lieutenant, 32d Regt., Sept. 21, 1888.	N. Y.

FORTY-SEVENTH REGIMENT — (Eight Companies.)

Second Brigade.

Armory, Corner Fourth and North Second streets, Brooklyn, E. D.

Edward F. Gaylor, July 2, 1884 .....	.....	.....	Private, Co. G, 47th Regt., Nov. 20, 1871; Corporal, Feb. 20, 1873; Sergeant, April 29, 1874; Second Lieutenant, Oct. 14, 1874; First Lieutenant, Dec. 27, 1875; Captain, Aug. 2, 1876; Major, Sept. 28, 1881; Colonel, July 2, 1884.	N. Y.
Frederick S. Benson, Nov. 19, 1884....	.....	Sergeant-Major, 22d Mass. Vols., Oct. 8, 1861; Adjutant, June 22, 1862; discharged Aug. 26, 1864; Second Lieutenant, U. S. Signal Corps, Aug. 27, 1864; discharged Aug. 17, 1865; Brevet Captain, U. S. A., April 20, 1866.	Lieutenant-Colonel, 47th Regt., Nov. 19, 1884.....	Mass.
John G. Eddy, Nov. 19, 1884.....	.....	.....	Private, 47th Regt., Nov. 16, 1875; Second Lieutenant, Oct. 30, 1877; First Lieutenant, Oct. 8, 1878; Adjutant, April 6, 1881; Major, Nov. 19, 1884.	N. Y.

INFANTRY — FORTY-SEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Adjutant—First Lieutenant.</i> William H. Hubbell, Dec. 10, 1884	Private, Co. I, 47th Regt., April 10, 1865; Sergeant, Jan. 14, 1867; returned to ranks, 1869; Sergeant, March 2, 1869; Left General Guide, June 18, 1870; Right General Guide, Feb. 14, 1871; returned to ranks Aug. 14, 1871; First Sergeant, Co. K, Feb. 26, 1872; discharged March 13, 1878; First Lieutenant and Adjutant, Dec. 10, 1884.	N. Y.
<i>Quartermaster—First Lieutenant.</i> Edward Milner, Jan. 10, 1882	Private, Co. F, 47th Regt., Oct. 1, 1875; Corporal, June 12, 1876; Ordnance Sergeant, 47th Regt., April 17, 1878; Commissary Sergeant, Dec. 13, 1880; Quartermaster, Jan. 10, 1882.	Eng.
<i>Commissary of Subsistence—First Lieutenant.</i> Warren E. Smith, Feb. 18, 1885	First Lieutenant and Commissary of Subsistence, 47th Regt., Feb. 18, 1885.	N. Y.
<i>Surgeon—Major.</i> Edward Hilborne Ashwin, April 23, 1883	Private, Co. C, 8th Indiana Vols., June 9, 1862; discharged Sept., 24, 1862; Midshipman, U. S. Navy, July 22, 1863; resigned March 9, 1866.	First Lieutenant and Assistant Surgeon, 47th Regt., June 30, 1880; Captain and Surgeon, Nov. 2, 1881; Major and Surgeon, April 23, 1883.	Eng.
<i>Assistant Surgeon—Captain.</i> George C. Jeffery, Oct. 29, 1884	Captain and Assistant Surgeon, 47th Regt., Oct. 29, 1884.	N. Y.
<i>Chaplain—Captain.</i> Henry A. Powell, March 7, 1888	Chaplain, 47th Regt., March 7, 1888.	N. Y.

<i>Inspector of Rifle Practice—Captain.</i> Alvah G. Brown, Jan. 16, 1876.....	Private, Co. H, 71st N. Y. S. Militia, April 21 to July 30, 1861.	Private, Co. H, 71st Regt., April 21 to July 30, 1861; Second Lieutenant, 47th Regt., Feb. 7, 1872; First Lieutenant, Dec. 10, 1875; Captain and Inspector of Rifle Practice, Jan. 16, 1876.	N. Y.
<i>Captains.</i> Alfred A. Doughty, May 25, 1869; Brevet Major, Oct. 29, 1877.....	B Private, 47th N. G., S. N. Y., May 27 to Sept. 1, 1862; First Sergeant, 47th N. G., S. N. Y., June 17 to July 23, 1863.	Private, 47th Regt., April 2, 1862; First Sergeant, May 30, 1863; Second Lieutenant, Oct. 16, 1863; First Lieutenant, Feb. 2, 1866; Captain, May 25, 1869.	N. Y.
William R. Pettigrew, Sept. 11, 1878..	G	Private, Co. C, 47th Regt., Oct. 7, 1865; First Lieutenant, June 7, 1876; Captain, Co. G, Sept. 11, 1878.	Scot.
Frank J. LeCount, Jr., Nov. 25, 1881..	K Private, Co. C, 13th N. G., S. N. Y., May 28 to Sept. 5, 1862; Private, 47th N. G., S. N. Y., June 17 to July 23, 1863.	Private, Co. C, 13th Regt., May 28 to Sept. 5, 1862; Private, Co. B, 47th Regt., Oct. 19, 1862; Corporal; Sergeant; honorably discharged Nov. 16, 1869; Second Lieutenant, Co. K, June 14, 1878; First Lieutenant, July 15, 1881; Captain, Nov. 25, 1881.	N. Y.
William H. Eddy, Feb. 4, 1884.....	I	Private, Co. E, 47th Regt., Nov. 16, 1875; Corporal, May 9, 1876; Sergeant, Jan. 15, 1878; Second Lieutenant, Co. G, Aug. 5, 1879; First Lieutenant, April 14, 1882; Captain, Co. I, Feb. 4, 1884.	N. J.
Hewling H. Quick, April 12, 1887.....	E	Private, Co. I, 13th Regt., Dec. 1, 1880; Sergeant, Sept. 1, 1882; returned to ranks and transferred to Co. F, 13th Regt., Jan. 5, 1883; Sergeant, Feb. 1, 1883; First Lieutenant, 47th Regt., June 9, 1885; Captain, April 12, 1887.	N. J.
John B. Christoffel, Jr., May 6, 1887..	D	Private, Co. H, 47th Regt., June 25, 1878; Left General Guide, May 25, 1881; Right General Guide, Dec. 8, 1881; Ordnance Sergeant, Feb. 8, 1882; Commissary Sergeant, Feb. 27, 1884; Second Lieutenant, Co. F, Aug. 18, 1884; First Lieutenant, Dec. 21, 1885; Captain, May 6, 1887.	N. Y.
Francis J. Veritzan, March 8, 1888.....	A	Private, Co. G, 47th Regt., Sept. 17, 1878; Corporal, May 15, 1879; Sergeant, Sept. 18, 1879; First Sergeant, Nov. 17, 1881; First Lieutenant, May 27, 1885; Captain, Co. A, March 8, 1888.	N. Y.

INFANTRY — FORTY-SEVENTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants.</i>				
Charles H. McIlvaine, March 23, 1885.	B	.....	Private, 47th Regt., Jan. 27, 1879; Second Lieutenant, Aug. 1, 1881; First Lieutenant, March 23, 1885.	Penn.
Wm. Clarke Roe, June 11, 1886.	E	.....	Private, Co. D, 7th Regt., Oct. 31, 1884; First Lieutenant, Co. D, 47th Regt., June 11, 1886; transferred to Co. E, June 14, 1887.	N. Y.
R. George Williams, April 1, 1887.	K	.....	Private, 47th Regt., Nov. 17, 1865; Corporal, 1867; Sergeant, Sept., 1869; First Sergeant; Second Lieutenant, May 2, 1876; resigned Oct. 25, 1877; First Lieutenant, Co. K, April 1, 1887.	Eng.
J. Wilton Barlow, May 17, 1887.	I	.....	Private, Co. B, 7th Battalion, N. G., S. N. J., for two years; Private, Co. A, 47th Regt., May 20, 1885; Second Lieutenant, Co. I, Jan. 5, 1886; First Lieutenant, May 17, 1887.	Ohio.
Emile F. Christoffel, June 27, 1887.	D	.....	Private, Co. F, 47th Regt., Jan. 17, 1881; Corporal, Oct. 10, 1881; Sergeant, Nov. 19, 1883; First Sergeant, July 2, 1884; Second Lieutenant, March 31, 1886; resigned April 6, 1887; First Lieutenant, Co. D, June 27, 1887.	N. Y.
Charles L. Spier, Oct. 10, 1887.	F	.....	Private, Co. D, 23d Regt., May 4, 1883; Second Lieutenant, Co. E, 13th Regt., June 18, 1885; transferred to Co. A, Oct. 15, 1886; resigned Feb. 16, 1887; First Lieutenant, 47th Regt., Oct. 10, 1887.	N. J.

Frank Harrison, April 3, 1888.....	A	Naval Apprentice, U.S.N., June 15, 1868; honorably discharged Aug. 19, 1871; Sub-Lieutenant, Imperial Brazilian Navy, Oct. 1, 1871; discharged July 3, 1875.	Private, Co. K, 47th Regt., Oct. 16, 1875; Second Lieutenant, Jan. 17, 1876; First Lieutenant, Feb. 28, 1877; First Lieutenant, 13th Regt., Aug. 9, 1877; Captain, March 22, 1878; resigned Dec. 19, 1879; First Lieutenant, 13th Regt., May 18, 1880; discharged March 2, 1882; First Lieutenant, 47th Regt., April 3, 1888.	N. Y.
Geo. E. Libbey, May 28, 1888	G	.....	Private, Co. A, 10th Regt., Mass. V. M., July 10, 1872; Corporal, Dec. 5, 1872; Sergeant, June 8, 1873; discharged Aug. 1, 1875; Private, Co. G, 47th Regt., Sept. 27; 1883; Sergeant, Oct. 15, 1884; First Sergeant, July 1, 1885; Second Lieutenant, March 8, 1888; First Lieutenant, May 28, 1888.	.....
<i>Second Lieutenants.</i>				
Eugene E. Bishop, Oct. 27, 1886.....	B	.....	Private, 23d Regt., Nov. 8, 1870; discharged March 6, 1882; Second Lieutenant, 47th Regt., Oct. 27, 1886.	N. Y.
A. Polhemus Cobb, April 1, 1887	K	.....	Private, 17th Separate Company, Dec. 17, 1883; Corporal, Feb. 21, 1885; Second Lieutenant, Co. K, 47th Regt., April 1, 1887.	N. Y.
Alfred C. Harrison, Jr., Aug. 9, 1887..	I	.....	Private, Co. I, 47th Regt., Feb. 2, 1882; Corporal, May 20, 1882; Sergeant, April 7, 1884; First Sergeant, July 29, 1885; Second Lieutenant, Aug. 9 1887.	N. Y.
Homer L. Bartlett, Aug. 24, 1887.....	D	.....	.....	..
Benjamin R. Meserole, April 3, 1888..	A	.....	Private, Co. A, 47th Regt., Oct. 24, 1883; Sergeant, April 10, 1884; First Sergeant, July 15, 1885; Second Lieutenant, April 3, 1888.	N. Y.
Francis J. Monaghan, July 30, 1888....	G	.....	Private, Co. G, 47th Regt., Jan. 30, 1885; Corporal, Dec. 2, 1886; Second Lieutenant, July 30, 1888.	N. Y.

INFANTRY — (Continued).
SIXTY-FIFTH REGIMENT — (Eight Companies).
Fourth Brigade.
Armory at State Arsenal on Broadway, Buffalo.

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Colonel.</i> Samuel M. Welch, Jr., Aug. 1, 1887.....	First Lieutenant, Co. I, 65th Regt., May 26, 1879; Captain, June 30, 1879; Major, Feb. 22, 1882; Lieutenant-Colonel, Nov. 1, 1883; Colonel, Aug. 1, 1887.	N. Y.
<i>Lieutenant-Colonel.</i> John E. Robie, Sept. 15, 1887.....	Private, 74th Regt., July 10, 1864; discharged July 10, 1871; First Lieutenant, Co. G, 65th Regt., Nov. 3, 1880; Captain, Co. H, 65th Regt., Feb. 3, 1881; Major, 65th Regt., Nov. 1, 1883; Lieutenant-Colonel, Sept. 15, 1887.	N. Y.
<i>Major.</i> William T. Parsons, Oct. 27, 1887.....	Second Lieutenant, Co. F, 65th Regt., June 25, 1879; Captain, Jan. 7, 1880; Major, Oct. 27, 1887.	N. Y.
<i>Adjutant—First Lieutenant.</i> William H. Chapin, Mar. 22, 1886.....	First Lieutenant, 65th Regt., March 22, 1880; Adjutant, 74th Regt., Nov. 5, 1881; Major, Aug. 13, 1883; resigned May 8, 1884; First Lieutenant and Adjutant, 65th Regt., March 22, 1886.	N. Y.
<i>Quartermaster—First Lieutenant.</i> Harvey W. Putnam, June 30, 1888.....	First Lieutenant and Quartermaster, 65th Regt., June 30, 1888.	Fr.
<i>Commissary of Subsistence—First Lieutenant.</i> Oren G. Nichols, Dec. 7, 1882.....	Private, Co. F, 65th Regt., May 21, 1881; Second Lieutenant, Oct. 21, 1881; First Lieutenant, June 6, 1882; Commissary of Subsistence, Dec. 7, 1882.	N. Y.

<i>Surgeon—Major.</i> Albert H. Briggs, April 23, 1883.....	.....	Assistant Surgeon, Oct. 27, 1879; Captain and Surgeon, June 7, 1881; Major and Surgeon, April 23, 1883.	N. Y.
<i>Assistant Surgeon—Captain.</i> Floyd S. Crego, Oct. 25, 1887.....	.....	Captain and Assistant Surgeon, 65th Regt., Oct. 25, 1887.	N. Y.
<i>Chaplain—Captain.</i> .....	.....	.....	.....
<i>Inspector of Rifle Practice—Captain.</i> George J. Metzger, Nov. 1, 1887.....	.....	Quartermaster, 65th Regt., Dec. 7, 1882; Captain and Inspector of Rifle Practice, Nov. 1, 1887.	N. Y.
<i>Captains.</i> Angelo C. Lewis, July 3, 1882.....	I	Captain, 65th Regt., July 3, 1882	Vt.
George H. Howard, Sept. 17, 1883.....	C	Second Lieutenant, Co. C, Aug. 7, 1882; Captain, Sept. 17, 1883.	N. Y.
.....
Otto F. Langenbach, Nov. 13, 1883.....	H	Second Lieutenant, Co. H, 65th Regt., Jan. 13, 1880; First Lieutenant, Dec. 22, 1881; Captain, Nov. 13, 1883.	Ohio.
John H. Swanson, Nov. 9, 1885.....	D	Private, 4th (now 13th) Separate Company, April 5, 1877; Second Lieutenant, Nov. 9, 1880; Second Lieutenant, 65th Regt., Nov. 18, 1884; Captain, Co. D, Nov. 9, 1885.	Swe.
George J. Haffa, March 22, 1887.....	A	Captain, Co. A, 65th Regt., March 22, 1887.....	N. Y.
Allison K. Hume, Oct. 10, 1887.....	B	Private, Co. F, 65th Regt., June 23, 1881; Sergeant, Jan. 25, 1882; Right General Guide, May 3, 1883; returned to ranks Dec. 19, 1883; Second Lieutenant, Co. B, March 14, 1885; resigned Dec. 2, 1886; Captain, Co. B, Oct. 10, 1887.	.....
Charles E. P. Babcock, Nov. 21, 1887.	F	Private, Co. F, 65th Regt., Oct. 4, 1882; Sergeant, Feb. 7, 1883; First Sergeant, April 28, 1885; First Lieutenant, March 15, 1886; Captain, Nov. 21, 1887.	N. Y.

INFANTRY — SIXTY-FIFTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Joseph B. Rawson, Jr., Feb. 21, 1888.	G	.....	Second Lieutenant, Co. G, 65th Regt., April 5, 1887; First Lieutenant, Nov. 22, 1887; Captain, Feb. 21, 1888.	N. Y.
<i>First Lieutenants.</i>				
Philip Fogarty, Nov. 18, 1884 .. •	H	.....	Second Lieutenant, Nov. 13, 1883; First Lieutenant, Nov. 18, 1884.	.....
John Ratcliffe, Aug. 24, 1886.....	D	.....	Second Lieutenant, Co. D, 65th Regt., May 11, 1886; First Lieutenant, Aug. 24, 1886.	N. Y.
Walter F. Nurzey, March 10, 1887....	C	.....	Private, Co. C, 74th Regt., March 2, 1877; Sergeant, May 4, 1878; First Sergeant, July 12, 1878; Second Lieutenant, Aug. 15, 1879; First Lieutenant, Jan. 30, 1880; resigned Jan. 12, 1882; Second Lieutenant, Co. C, 65th Regt., April 12, 1886; First Lieutenant, March 10, 1887.	Eng.
Albert J. Myer, Nov. 15, 1887.....	A	Cadet, U. S. Military Academy 1880-1881.	First Lieutenant, Co. A, 65th Regt., Nov. 15, 1887.	N. Y.
Edward A. Hall, Dec. 5, 1887.....	F	.....	Second Lieutenant, Co. F, 65th Regt., March 15, 1886; First Lieutenant, Dec. 5, 1887.	N. Y.
George B. Hinkley, Dec. 19, 1887....	B	.....	First Lieutenant, Co. B, 65th Regt., Dec. 19, 1887.	N. Y.
Lewis G. Northrup, March 6, 1888...	G	.....	Private, Co. F, 74th Regt., Dec. 20, 1881; Corporal, Oct. 30, 1883; Second Lieutenant, Co. D, 65th Regt., Oct. 5, 1886; First Lieutenant, Co. G, March 6, 1888.	N. Y.
Arthur B. Christey, March 19, 1888 ..	I	.....	Private, Co. F, 65th Regt., Dec. 1, 1885; First Lieutenant, Co. I, 65th Regt., March 19, 1888.	N. Y.
<i>Second Lieutenants.</i>				
William C. Boardman, Dec. 19, 1887 ..	B	.....	Second Lieutenant, Co. B, 65th Regt., Dec. 19, 1887.	N. Y.

Eugene A. Smith, Jan. 23, 1888	F	Private, Co. F, 65th Regt., Oct. 15, 1881; Corporal, Dec. 20, 1882; Sergeant, May 1, 1885; First Sergeant, Jan. 9, 1888; Second Lieutenant, Jan. 23, 1888.	N. Y.
William Edward Cutler, Feb. 20, 1888	I	Private, 65th Regt., Feb. 13, 1883; Second Lieutenant, Co. I, 65th Regt., Feb. 20, 1888.	N. Y.
Frederick T. Lambrecht, March 13, 1888	C	Private, 65th Regt., March 10, 1884; Second Lieutenant, Co. C, 65th Regt., March 13, 1888.	Mich.
Frank M. Chapin, March 20, 1888	D	Second Lieutenant, Co. D, 65th Regt., March 20, 1888.	N. Y.
Ernest W. Dobbins, March 20, 1888	H	Private, Co. H, 65th Regt., April 24, 1886; Second Lieutenant, March 20, 1888.	N. Y.

SIXTY-NINTH REGIMENT — (Ten Companies.)

First Brigade.

Armory, Tompkins Market, New York City.

James Cavanagh, Nov. 20, 1867	Colonel.	Captain, 60th N. Y. S. Militia, May 9, 1861, to Aug. 3, 1861; Major, 60th N. Y. Vols., Nov. 2, 1861; discharged May 16, 1863, for disability; in 69th N. G., S. N. Y., from June 25 to July 25, 1863; and as Lieutenant-Colonel, 69th N. G., S. N. Y., from July 6 to Oct. 6, 1864.	Ire.
James Moran, March 12, 1888	Lieutenant-Colonel.	Private, Co. E, 69th N. Y. S. Militia, fall, 1852; First Lieutenant, March 9, 1857; Captain, Jan. 13, 1859; in volunteer service from Nov. 2, 1861; Lieutenant-Colonel, 69th N. G., S. N. Y., Aug. 10, 1863; Colonel, Nov. 29, 1867.	Ire.
Edward Duffy, March 16, 1876	Major.	Private, Co. F, 69th Regt., Nov. 5, 1869, Second Lieutenant, May 3, 1875; Adjutant, Nov. 5, 1875; Lieutenant-Colonel, March 12, 1888.	Ire.
		Private, Co. G, 60th Regt., June 3, 1867; First Lieutenant, March 14, 1871; Major, Feb. 13, 1875; honorably discharged Feb. 7, 1876; Major, March 16, 1876.	

INFANTRY—SIXTY-NINTH REGIMENT—(Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Adjutant—First Lieutenant.</i> John Murphy, April 16, 1888.....	Private, Co. K, 69th Regt., N.G., S. N. Y., June 25 to July 25, 1863; Private, Co. A, 69th N. Y. Vols., March 1, 1864; discharged Nov. 4, 1864.	Private, Co. K, 69th Regt., June 25 to July 25, 1863; Private, Co. C, 69th Regt., Aug. 16, 1880; Sergeant, March 22, 1882; Second Lieutenant, Dec. 31, 1883; First Lieutenant, Dec. 29, 1884; First Lieutenant and Adjutant, April 16, 1888.	N. Y.
<i>Quartermaster—First Lieutenant.</i> James Joseph Ward, Sept. 5, 1882.....	Second Lieutenant, Co. G, 69th Regt., Aug. 9, 1877; Quartermaster, 69th Regt., Sept. 5, 1882.	Ire.
<i>Commissary of Subsistence—First Lieutenant.</i> Robert E. Ford, May 1, 1887.....	Private, Co. F, 69th Regt., April, 1886; First Lieutenant and Commissary of Subsistence, May 1, 1887.	Conn.
<i>Surgeon—Major.</i>
<i>Assistant Surgeon—Captain.</i> Thomas J. Loughlin, July 9, 1888.....	Captain and Assistant Surgeon, 69th Regt., July 9, 1888.	.....
<i>Chaplain—Captain.</i> Matthew P. Breen, Sept. 15, 1877.....	Captain and Chaplain, 69th Regt., Sept. 15, 1877.	Ire.
<i>Inspector of Rifle Practice—Captain.</i> John J. Ryan, May 2, 1887.....	Commissary of Subsistence, 69th Regt., Aug. 1, 1885; Captain and Inspector of Rifle Practice, May 2, 1887.	.....
<i>Captains.</i> Michael Bennan, May 10, 1865.....	A	Sergeant, Co. A, 69th N. Y. S. Militia, from May 9 to Aug. 3, 1861.	Private, Co. A, 69th Regt., July 6, 1857; Sergeant, April 18, 1860; Captain, May 10, 1865.	Ire.

John Kerr, Jan. 29, 1860; Brevet Major, March 18, 1876.....	K	Private, Co. B, 69th N. Y. S. Militia, from May 9, 1861; captured July 21, 1861; mustered out May 15, 1862; First Sergeant from June 25 to July 25, 1863; Second Lieutenant from July 6 to Oct. 6, 1864.	Private, Co. B, 69th Regt., April 19, 1861; Sergeant, Nov. 12, 1862; First Sergeant, June 27, 1863; Second Lieutenant, April 17, 1864; Captain, Co. K, Jan. 29, 1869.	Ire.
Hugh Coleman, Jan. 4, 1875.....	E	Private, Co. A, 5th Ohio Vols., in 1862; Band leader; honorably discharged 1862.	Second Lieutenant, Co. E, 69th Regt., Oct. 13, 1873; Captain, Jan. 4, 1875.	Mass.
Stephen P. Ryan, August 9, 1877.....	G	.....	Private, Co. G, 69th Regt., Dec. 1, 1870; Corporal, May 2, 1872; Sergeant, Sept. 3, 1874; Second Lieutenant, Dec. 3, 1874; Captain, Aug. 9, 1877.	Ire.
James G. Cunningham, Dec. 6, 1880.	I	.....	Private, Co. D, 69th Regt., June 4, 1873; Corporal, Aug. 6, 1875; Sergeant, Dec. 14, 1875; Ordnance Sergeant, 69th Regt., Oct. 8, 1877; Second Lieutenant, March 11, 1880; Captain, Dec. 6, 1880.	Ire.
James Conlon, Dec. 27, 1881.....	B	.....	Private, Co. D, 69th Regt., Sept. 3, 1866; Corporal, Oct. 1, 1866; Sergeant, Aug. 3, 1868; First Sergeant, Dec. 8, 1870; transferred to Co. H, Jan. 15, 1874; First Sergeant, Feb. 17, 1874; First Lieutenant, Co. B, May 7, 1877; Captain, Dec. 27, 1881.	Ire.
Denis C. McCarthy, Nov. 1, 1883.....	C	.....	Private, Co. C, 69th Regt., Sept. 8, 1866; Corporal, May 6, 1868; Sergeant, June 2, 1869; Second Lieutenant, March 18, 1870; honorably discharged Dec. 27, 1873; First Sergeant, Nov. 30, 1874; Second Lieutenant, Feb. 2, 1880; Captain, Nov. 1, 1883.	Ire.
Thomas Mortimer, March 23, 1885.....	F	.....	Private, Co. F, 69th Regt., Sept. 3, 1880; Sergeant, Sept. 1, 1883; Second Lieutenant, Dec. 19, 1883; Captain, March 23, 1885.	Ire.
Maurice Cox, April 27, 1885.....	D	.....	Private, Co. D, 69th Regt., April 2, 1872; Sergeant, Jan. 5, 1875; First Sergeant, Sept. 2, 1876; First Lieutenant, Feb. 21, 1882; Captain, April 27, 1885.	Ire.
Patrick J. Morgan, Oct. 26, 1866.....	H	.....	Private, Co. D, 69th Regt., Jan. 4, 1876; Corporal, Sept. 29, 1879; Sergeant, April 1, 1880; Quarter-master-Sergeant, May 18, 1882; First Lieutenant, Co. H, Nov. 8, 1883; Captain, Oct. 26, 1886.	.....

INFANTRY — SIXTY-NINTH REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>First Lieutenants.</i> John E. O'Brien, Dec. 6, 1880.....	E	Private, Co. H, 69th Regt., May 26, 1862, for three months; mustered out Sept. 3, 1862.	Private, Co. H, 69th Regt., May 26, 1862, to Sept. 3, 1862; Second Lieutenant, 95th Regt., N. G., S. N. Y., Nov. 9, 1863; disbanded, 1866; Private, 69th Regt., June 22, 1875; First Lieutenant, Co. E, Dec. 6, 1880.	Ire.
James Mahoney, Dec. 6, 1881	I	.....	Private, Co. I, 69th Regt., Feb. 10, 1880; Corporal, April 6, 1880; Sergeant, May 4, 1880; Second Lieutenant, Feb. 18, 1881; First Lieutenant, Dec. 6, 1881.	Conn.
Paul F. Leonard, April 11, 1883.....	B	.....	Private, 69th Regt., May 14, 1879; Commissary Sergeant, Nov. 17, 1881; Second Lieutenant, Co. B, April 11, 1883.	N. Y.
William Hogan, Feb. 7, 1884.....	G	.....	Private, Co. G, 69th Regt., Dec. 19, 1867; Sergeant, May 13, 1875; First Sergeant, Nov. 6, 1877; Second Lieutenant, Feb. 1, 1883; First Lieutenant, Feb. 7, 1884.	Ire.
John B. Woods, Sept. 1, 1884.....	K	.....	Private, Co. K, 69th Regt., June 25, 1883; Sergeant, July 10, 1884; First Lieutenant, Sept. 1, 1884.	Ire.
William Desmond, June 16, 1885.....	D	.....	Private, Co. D, 69th Regt., April 2, 1872; Sergeant, Dec. 10, 1875; Quartermaster-Sergeant, Jan. 13, 1879; discharged July 8, 1894; First Lieutenant, Co. D, 69th Regt., June 16, 1885.	N. Y.
Peter Carroll, March 29, 1886.....	F	.....	Private, 69th Regt., Sept. 7, 1880; Left General Guide, 1884; Commissary Sergeant, 1884; Second Lieutenant, Co. F, 69th Regt., June 16, 1885; First Lieutenant, March 29, 1886.	Ire.

John McCauley, May 17, 1887.....	A	.....	Private, Co. A, 60th Regt., Nov. 9, 1881; Quartermaster-Sergeant, Dec. 11, 1882; discharged Feb. 21, 1887; First Lieutenant, May 17, 1887.	Ire.
John O'Connell, May 31, 1888.....	C	Private, Co. A, 69th N. Y. Vols., Sept. 27, 1861; reenlisted in the field; Quartermaster-Sergeant of Regt., Jan., 1864; discharged June 30, 1865.	Private, Co. C, 60th Regt., Sept. 1, 1879; Quartermaster-Sergeant, Sept. 11, 1879; First Sergeant, Dec. 1, 1880; Second Lieutenant, Dec. 29, 1884; First Lieutenant, May 31, 1888.	Ire.
William McLoughlin, June 6, 1888. ..	H	.....	Private, Co. H, 60th Regt., 1875; Corporal, Sept. 7, 1876; Sergeant, Nov. 6, 1879; discharged March 29, 1882; reenlisted June 12, 1882; reenlisted June 23, 1884; Second Lieutenant, Jan. 12, 1885; First Lieutenant, June 6, 1888.	Ire.
Patrick Farrelly, June 25, 1877.....	D	.....	Private, Co. D, 60th Regt., Dec. 16, 1875; Corporal, March 1, 1877; Second Lieutenant, June 25, 1877.	Ire.
James B. Manahan, May 24, 1880.....	E	.....	Private, Co. E, 60th Regt., Dec. 8, 1879; Second Lieutenant, May 24, 1880.	N. Y.
Luke C. Quinn, May 18, 1882.....	I	.....	Private, Co. I, 60th Regt., Jan. 4, 1879; Sergeant, Jan. 6, 1880; First Sergeant, June 14, 1882; Second Lieutenant, May 18, 1882.	N. Y.
Edward T. McCrystal, June 16, 1884..	K	.....	Private, Co. I, 69th Regt., March 25, 1881; Corporal, Sept. 20, 1881; Sergeant, Aug. 13, 1883; Second Lieutenant, Co. K, June 16, 1884.	Ire.
Patrick J. Moriarty, Dec. 15, 1884....	B	.....	Private, Co. B, 60th Regt., April 1, 1879; Sergeant, March 22, 1882; Second Lieutenant, Co. B, Dec. 15, 1884.	Ire.
John J. Scanlon, Dec. 28, 1886.....	F	.....	Private, 60th Regt., April 20, 1883; Sergeant, July 3, 1885; Second Lieutenant, Dec. 28, 1886.	Ire.
Francis J. Magee, May 26, 1887.....	G	.....	Private, Co. G, 60th Regt., Feb. 6, 1882; Sergeant, Dec. 3, 1885; Second Lieutenant, May 26, 1887.	Ire.
Michael Lynch, Jan. 25, 1888.....	A	.....	Private, Co. A, 60th Regt., March 1, 1876; Corporal, June 23, 1886; Second Lieutenant, Jan. 25, 1888.	Ire.
Denis J. Feery, Oct. 25, 1888.....	H	.....	Private, Co. H, 69th Regt., July 4, 1884; Quartermaster-Sergeant, Feb. 21, 1887; Second Lieutenant, Oct. 25, 1888.	Ire.

INFANTRY — (*Continued*).
SEVENTY-FIRST REGIMENT — (Nine Companies).

First Brigade.

Armory, Corner West Forty-fifth street and Broadway, New York City.

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Colonel.</i> Frederick Kopper, July 19, 1887.	Private, Co. D, 7th N. Y. S. Militia from June 17 to July 21, 1863.	Private, Co. D, 7th Regt., June 16, 1863; Corporal, Dec. 30, 1869; Sergeant, March 15, 1872; First Sergeant, Jan. 31, 1879; First Lieutenant, March 5, 1883; discharged Oct. 4, 1884; First Lieutenant and Adjutant, 71st Regt., Oct. 4, 1884; Major, Dec. 17, 1884; Lieutenant-Colonel, Feb. 26, 1887; Colonel, July 19, 1887.	Scot.
<i>Lieutenant-Colonel.</i> James A. Dennison, Sept. 15, 1887.	In 15th Mo. Vols., U. S. Reserve Corps, from Sept., 1861, to Jan., 1862; Private, Co. E, 8th Mo. S. Mil. Cav., from April 13, 1862, to April 12, 1865; Cadet, U. S. A., Sept., 1866; Second Lieutenant, 2d U. S. artillery, June 15, 1870; Second Lieutenant, 8th U. S. Cav., from Oct., 1871, to Aug., 1872; Major of Engineers, Egyptian Army, from Jan. 1, 1875, to Jan. 1, 1877.	Lieutenant-Colonel, 71st Regt., Sept. 15, 1887.	Ind.
<i>Major.</i> Wallace A. Downs, April 19, 1887.	Adjutant, 16th Battalion, Dec. 28, 1874; Major, Aug. 8, 1876; discharged April 28, 1880; Adjutant, 71st Regt., Sept. 28, 1886; Major, April 19, 1887.	N. Y.

<i>First Lieutenant and Adjutant.</i> Philip S. Tilden, March 10, 1887.....	.....	Private, Co. H, 71st Regt., April 26, 1880; Corporal, Feb. 7, 1882; transferred to Co. I, May 7, 1882; Sergeant, April 29, 1883; Second Lieutenant, 71st Regt., July 21, 1884; First Lieutenant, Jan. 7, 1885; discharged Sept. 16, 1885; First Lieutenant, Co. B, 71st Regt., March 10, 1887; Adjutant, with original rank, Oct. 19, 1887; First Lieutenant and Quartermaster, 71st Regt., Aug. 1, 1887.	N. J.
<i>First Lieutenant and Quartermaster.</i> William E. D. Stokes, Aug. 1, 1887.....	.....	.....	N. Y.
<i>Commissary of Subsistence—First Lieutenant.</i> Edgar S. Auchincloss, Aug. 1, 1887.....	.....	First Lieutenant and Commissary of Subsistence, Aug. 1, 1887.	N. Y.
<i>Surgeon—Major.</i> Edward T. T. Marsh, March 4, 1885.....	.....	Surgeon, 71st Regt., March 4, 1885.....	N. Y.
<i>Assistant Surgeon—Captain.</i> .....	.....	.....	.....
<i>Inspector of Rifle Practice—Captain.</i> Charles H. Hoyt, Aug. 1, 1887.....	.....	Private, Co. I, 7th Regt., May 9, 1882; Captain and I. R. P., 71st Regt., Aug. 1, 1887.	Mass.
<i>Chaplain—Captain.</i> .....	.....	.....	.....
<i>Captains.</i> William C. Clark, Nov. 14, 1865; Bre- vet Major, June 28, 1877.....	D	Private, 79th Regt., militia, Jan. 13, 1859; Corporal, ; Sergeant, May 13, 1861; Second Lieutenant, Co. G, May 16, 1862; First Lieutenant, Co. F, Sept. 23, 1862; Captain, Co. I, April 15, 1863; honorably discharged May 31, 1864; Captain, Co. E, Nov. 14, 1865; Supernumerary, Dec. 18, 1875; on duty as Captain, 71st Regt., since Jan. 31, 1876.	Scot.

INFANTRY — SEVENTY-FIRST REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Wright D. Goss, April 30, 1885.....	K	.....	Private, Co. K, 71st Regt., Jan. 21, 1880; Corporal, Feb. 1, 1882; Second Lieutenant, Nov. 22, 1882; First Lieutenant, Oct. 19, 1883; Captain, April 30, 1885.	Ohio.
Alfred P. Delcambre, Oct. 6, 1885.....	H	.....	Co. C, 2d Conn. N. G., from 1868 to 1872; Private, 8th Regt., May 7, 1879; Second Lieutenant, Aug. 16, 1882; discharged May 29, 1885; First Lieutenant, 71st Regt., June 16, 1885; Captain, Co. H, Oct. 6, 1885.	Ire.
Augustus T. Francis, March 19, 1886.	C	Corporal, Co. C, 71st Regt., April 19 to July 30, 1861; First Sergeant, from May 28 to Sept. 2, 1862.	Private, Co. C, 71st Regt. March, 1861; Corporal, April, 1861; First Sergeant, May, 1862; First Lieutenant, June, 1864; Adjutant, Dec., 1866; resigned Aug. 5, 1871; First Lieutenant and Adjutant, 71st Regt., March 4, 1885; Captain, Co. C, March 19, 1886.	.....
Charles M. Kennedy, April 13, 1886..	A	.....	Private, 71st Regt., Sept. 15, 1884; Color Bearer, Sept. 15, 1884; First Lieutenant, Co. F, Dec. 19, 1884; Captain, Co. A, April 13, 1886.	N. J.
Abel W. Belknap, Jan. 21, 1887.....	B	.....	Private, 71st Regt., Sept. 21, 1870; Corporal, Nov. 8, 1870; Sergeant, Dec. 8, 1870; Second Lieutenant, Feb. 9, 1872; First Lieutenant, May 3, 1873; Captain, Nov. 6, 1873; Brevet Major, Nov. 6, 1873; rendered Supernumerary, Dec. 19, 1884; Captain, 71st Regt., Jan. 21, 1887.	N. Y.
John A. H. Dressel, March 30, 1887..	F	.....	Private, Co. D, 22d Regt., Feb. 27, 1877; Quartermaster-Sergeant, Oct. 27, 1879; discharged Dec. 18, 1882; Private, Co. H, 13th Regt., Feb. 18, 1885; discharged March 26, 1886; Second Lieutenant, Co. K, 71st Regt., May 19, 1886; Captain, Co. F, March 30, 1887.	N. Y.

<i>First Lieutenants.</i>	Alfred Jefferson, Jan. 5, 1886.....	H	Private, Co. K, 71st Regt., Dec. 5, 1877; Corporal, April 7, 1880; Second Lieutenant, 8th Regt., Sept. 14, 1882; Captain, Co. C, Jan. 28, 1884; resigned Dec. 2, 1885; First Lieutenant, Co. H, 71st Regt., Jan. 5, 1886.	N. Y.
			Private, Co. A, 71st Regt., January, 1884; First Lieutenant, 71st Regt., Dec. 7, 1886.	N. Y.
	Edward C. O'Brien, Dec. 7, 1886.....	A	Private, Co. I, 71st Regt., April 5, 1880; Corporal, Sept. 4, 1884; Second Lieutenant, Feb. 9, 1885; First Lieutenant, March 2, 1887; transferred to Co. F, March 26, 1888.	Ire.
			Private, Co. B, 7th Regt., June, 1881; Second Lieutenant, Co. B, 71st Regt., March 10, 1887; First Lieutenant, Oct. 18, 1887.	N. Y.
	Clinton H. Smith, Oct. 18, 1887.....	B	Private, 71st Regt., Oct. 5, 1881; Left General Guide, Nov. 20, 1882; Right General Guide, March, 1883; returned to company March 24, 1884; Corporal, Nov. 7, 1884; Sergeant Standard Bearer, March 10, 1885; discharged Oct. 30, 1886; Second Lieutenant, Co. C, Oct. 14, 1887; First Lieutenant, June 18, 1888.	N. Y.
			Private, Co. E, 79th Regt., Nov., 1873; Corporal, Oct., 1874; Sergeant, Oct., 1875; discharged by disbandment, Dec., 1875; enlisted in 71st Regt., Jan. 31, 1876; Quartermaster-Sergeant, Jan. 31, 1876; discharged Jan. 1, 1883; reënlisted April 26, 1883; First Sergeant, April 26, 1883; First Lieutenant, Co. D, July 5, 1888.	N. Y.
	Peter H. Halley, July 5, 1888.....	D	Second Lieutenant, Co. D, 71st Regt., Nov. 18, 1886.	La.
			Private, 16th Battalion, March 7, 1879; Corporal, Nov. 3, 1882; Sergeant, 4th Separate Co., March 7, 1884; Second Lieutenant, 71st Regt., March 1, 1887.	N. Y.
<i>Second Lieutenants.</i>	Charles B. Stone, Nov. 18, 1886.....	D	Private, Co. K, 71st Regt., Feb. 11, 1885; Corporal, May 5, 1886; Sergeant, Sept. 14, 1886; Second Lieutenant, May 27, 1887.	N. Y.
	William T. Gouch, March 1, 1887.....	A		
	Henry Deike, May 27, 1887.....	K		

INFANTRY — SEVENTY-FIRST REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		BORN.
		In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenants—(Continued).</i> James H. Southworth, June 1, 1887..	F	.....	Private, Co. F, 71st Regt., March 5, 1879; Sergeant, 1883; First Sergeant, September, 1884; Second Lieutenant, June 1, 1887.	N. Y.
Thomas W. Timpson, Dec. 27, 1887..	B	.....	Private, Co. I, 22d Regt., Nov. 17, 1884; Corporal, Nov. 17, 1886; Second Lieutenant, Co. B, 71st Regt., Dec. 27, 1887.	N. Y.
Frank Keck, July 6, 1888.....	C	.....	Private, Co. B, 7th Regt., Nov. 7, 1882; Second Lieutenant, Co. C, 71st Regt., July 6, 1888.	N. Y.

SEVENTY-FOURTH REGIMENT — (Seven Companies).

Fourth Brigade.

Armory at Virginia street and Tremont place, Buffalo.

<i>Colonel.</i> William M. Bloomer, April 10, 1883.....	.....	Private, Co. B, 74th Regt., Aug. 22, 1871; Sergeant, June 5, 1872; First Lieutenant, June 25, 1877; Captain, March 31, 1879; Colonel, 74th Regt., April 10, 1883.	N. Y.
<i>Lieutenant-Colonel.</i> Usual S. Johnson, May 14, 1883.....	.....	Major, 74th Regt., Oct. 6, 1880; Lieutenant-Colonel, May 14, 1883.	N. Y.
<i>Major.</i> George A. Davis, Jan. 4, 1886.....	.....	Private, Co. D, 74th Regt., Aug. 25, 1875; Quartermaster-Sergeant, Second Lieutenant, July 17, 1876; First Lieutenant, March 16, 1877; Captain, Feb. 18, 1878; discharged Dec. 11, 1880; Major, Jan. 4, 1886.	N. Y.

<i>Adjutant—First Lieutenant.</i> John C. White, Oct. 8, 1883.....	.....	Captain, 65th Regt., May 29, 1883; resigned Oct. 8, 1883; First Lieutenant and Adjutant, 74th Regt., Oct. 8, 1883.	N. Y.
<i>Quartermaster—First Lieutenant.</i> Henry R. Clark, Aug. 5, 1882.....	.....	First Lieutenant and Commissary of Subsistence, 74th Regt., Aug. 5, 1882; appointed Quartermaster, April 23, 1883, with former rank, Aug. 5, 1882.	N. Y.
<i>Commissary of Subsistence—First Lieutenant.</i> Willis R. Buck, Oct. 11, 1886.....	.....	First Lieutenant and Commissary of Subsistence, 74th Regt., Oct. 11, 1886.	N. Y.
<i>Surgeon—Major.</i> Charles G. Stockton, April 23, 1883.....	.....	First Lieutenant and Assistant Surgeon, Nov. 12, 1881; Major and Surgeon, April 23, 1883.	Ohio.
<i>Assistant Surgeon—Captain.</i> George W. York, May 21, 1884.....	.....	First Lieutenant and Assistant Surgeon, April 23, 1883; Captain and Assistant Surgeon, May 21, 1884.	Can.
<i>Chaplain—Captain.</i> Walter North, Jan. 10, 1880.....	.....	Chaplain, Jan. 10, 1880	Penn.
<i>Inspector of Rifle Practice—Captain.</i> William Franklin, April 23, 1883.....	.....	Private, Co. B, 74th Regt., May 14, 1881; Second Lieutenant, Sept. 1, 1881; Captain and Inspector of Rifle Practice, April 23, 1883.	Eng.
<i>Captains.</i> Charles Lee Abel, Oct. 3, 1881.....	C	Captain, Co. C, 74th Regt., Oct. 3, 1881.....	N. Y.
George C. Fox, May 9, 1882.....	F	Second Lieutenant, 65th Regt., Nov. 18, 1879; First Lieutenant, July 6, 1881; Captain, 74th Regt., May 9, 1882.	N. Y.
Peter Paulus, Nov. 27, 1882.....	G	Private, Co. G, 74th Regt., Jan. 5, 1876; Sergeant, Jan. 30, 1878; First Sergeant, Sept. 27, 1880; First Lieutenant, May 16, 1881; Captain, Nov. 27, 1882.	N. Y.
Albert J. Dance, Aug. 4, 1884.....	D	Private, Co. D, 74th Regt., June 5, 1879; Corporal, Sept. 9, 1879; Sergeant, March 7, 1881; Second Lieutenant, July 31, 1882; First Lieutenant, Jan. 8, 1883; Captain, Aug. 4, 1884.	Eng.
Frank N. Farrar, April 8, 1886.....	E	Private, Co. C, 74th Regt., July 14, 1883; Sergeant, July 16, 1883; First Sergeant, March 3, 1884; Second Lieutenant, June 4, 1884; Captain, Co. E, April 8, 1886.	N. Y.

INFANTRY — SEVENTY-FIRST REGIMENT — (Continued).

NAME, GRADE AND DATE OF RANK.	Company.	SERVICE.		Born.
		In the Armies of the United States.	In the National Guard.	
<i>Captains—(Continued).</i>				
Harrison C. Balcolm, June 8, 1888.....	B	.....	Private Co. B, 74th Regt., July 30, 1880; Corporal, Jan. 6, 1882; Sergeant, Aug. 1, 1882; First Sergeant, Feb. 25, 1884; Second Lieutenant, June 6, 1884; First Lieutenant, Feb. 11, 1885; Captain, June 8, 1888.	N. Y.
Robert M. Harding, Sept. 3, 1888.....	A	.....	Private, Second Separate Company, Oct. 25, 1862; dropped April 10, 1886; First Lieutenant, Co. A, 74th Regt., April 30, 1888; Captain, Sept. 3, 1888.	Ills.
<i>First Lieutenants.</i>				
William J. Sloan, April 23, 1883.....	C	.....	First Lieutenant and Commissary Substistence, 74th Regt., April 23, 1883; First Lieutenant, Co. C, May 12, 1886, with original rank.	N. Y.
Charles E. Oberest, May 30, 1883.....	G	Private, Co. H, 12th U. S. Infantry, Dec. 8, 1877; Corporal, Aug. 4, 1880; Sergeant, April 7, 1882; honorably discharged, Dec. 7, 1882.	Private, 74th Regt., May 7, 1877; dropped Dec. 10, 1877; taken up April 10, 1883; First Lieutenant, May 30, 1883.	N. Y.
William E. Otto, Jan. 13, 1885.....	F	.....	Private, Co. F, 74th Regt., May 6, 1881; Corporal, May 20, 1881; Sergeant, Sept. 16, 1881; First Sergeant, Oct. 19, 1882; First Lieutenant, Jan. 13, 1885.	N. Y.
John F. Clark, April 8, 1886.....	E	.....	First Lieutenant, Co. E, 74th Regt., April 8, 1886.	N. Y.
Henry L. Fish, Jr., April 11, 1888...	D	.....	Private, Co. E, 74th Regt., April 8, 1886; Corporal, April 13, 1886; Second Lieutenant, Co. D, March 9, 1887; First Lieutenant, April 11, 1888.	N. Y.
Samuel Byron Newton, Oct. 12, 1888.	B	.....	Private, Co. B, 74th Regt., Nov. 5, 1884; Second Lieutenant, March 24, 1887; First Lieutenant, Oct. 12, 1888.	Cal.

<i>Second Lieutenants.</i>			
William A. Angus, April 8, 1886	E	Private, Co. E, 74th Regt., April 8, 1886; Second Lieutenant, April 8, 1886.	N. Y.
George E. Gatley, May 12, 1886	C	Private, Co. E, 74th Regt., April 8, 1886; Sergeant, April 13, 1886; Second Lieutenant, Co. C, May 12, 1886.	N. Y.
Edmund P. Cottle, Oct. 19, 1886	F	Private, Signal Corps, 8th Brigade, June 16, 1885; disbanded Aug. 5, 1886; Second Lieutenant, 74th Regt., Oct. 19, 1886.	N. Y.
Clark T. Roberts, Dec. 12, 1887	A	Private, Co. A, 74th Regt., May 2, 1886; Corporal, Nov. 8, 1886; Sergeant, Sept. 12, 1887; Second Lieutenant, Dec. 12, 1887.	N. Y.
George M. Rose, June 20, 1888	D	Private, Co. B, 74th Regt., Aug. 29, 1882; Second Lieutenant, Co. D, June 20, 1888.	N. Y.

FIRST SEPARATE COMPANY.

Fourth Brigade.

Armory on Main street, Penn Yan, Yates County.

<i>Captain.</i>	Abraham Gridley, July 3, 1885.....	Private, First Separate Company, Dec. 18, 1876; Corporal, March 16, 1882; Second Lieutenant, Sept. 18, 1882; First Lieutenant, Jan. 26, 1883; Captain, July 3, 1885.	N. Y.
<i>First Lieutenant.</i>	George T. Wilkins, Oct. 5, 1885.....	Private, First Separate Company, Sept. 8, 1875; Corporal, April 25, 1881; Sergeant, Oct. 21, 1882; discharged Sept. 16, 1884; First Lieutenant, Oct. 5, 1885.	Eng.
<i>Second Lieutenant.</i>	Andrew C. Harwick, Jan. 26, 1883.....	Private, First Separate Company, Jan. 11, 1878; Corporal, March 16, 1882; Second Lieutenant, Jan. 26, 1883.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i>	Benjamin L. Holt, Sept. 8, 1883.....	Acting Assistant Surgeon in U. S. Army, May 1, 1875, to Dec. 11, 1876. 1883.	N. Y.

INFANTRY — (Continued).

SECOND SEPARATE COMPANY.

Fourth Brigade.

State Armory at Auburn, Cayuga County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> W. Maurice Kirby, May 11, 1881; Bre- vet Lieutenant-Colonel, Aug. 10, 1881	Private 3d N. Y. Volunteer Artillery, Jan. 1, 1862; Second Lieutenant, March 10, 1862; First Lieutenant, July 3, 1863; Captain, Feb. 17, 1865; honorably discharged July 8, 1865.	First Lieutenant and Adjutant, 40th Regt., Nov. 29, 1876; Lieutenant-Colonel, Feb. 20, 1880; Supernumery, Aug. 28, 1880; Captain, Second Separate Company, May 11, 1881.	N. Y.
<i>First Lieutenant.</i> Henry Silas Dunning, Dec. 28, 1886. .....	.....	Second Lieutenant, Second Separate Company, May 11, 1881; First Lieutenant, Dec. 28, 1886.	N. Y.
<i>Second Lieutenant.</i> Clarence James Barber, May 3, 1887. .....	.....	Private, Co. H, 54th Regt., Aug. 29, 1877; Corporal, Dec., 1877; Sergeant, 1878; discharged by disband- ment; Private, Second Separate Company, May 24, 1881; Corporal, June 14, 1881; Sergeant, Dec. 30, 1882; Second Lieutenant, May 3, 1887.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> John Gerin, July 16, 1883 .....	.....	Private, Second Separate Company, May 24, 1881; Assistant Surgeon, July 16, 1883.	Ont.

THIRD SEPARATE COMPANY.

Third Brigade.

*State Armory at Oneonta, Otsego County.**Captain.*

Walter Scott, Sept. 28, 1886

First Lieutenant.

Burr Mattice, Feb. 17, 1887

Second Lieutenant.

Edwin G. Bixby, Sept. 21, 1887

Assistant Surgeon—First Lieutenant.

Benjamin A. Church, May 8, 1886

Private, Third Separate Company, Dec. 29, 1880; Second Lieutenant, Aug. 1, 1881; First Lieutenant, Jan. 25, 1886; Captain, Sept. 28, 1886.

Private, Third Separate Company, Sept. 14, 1876; discharged April 13, 1883; Private, Aug. 8, 1883; Quartermaster-Sergeant, Aug. 19, 1883; Second Lieutenant, April 7, 1886; First Lieutenant, Feb. 17, 1887.

N. Y.

N. Y.

Ohio.

Private, Co. H, 5th N. Y. Volunteer Artillery, Aug. 15, 1864; discharged June 22, 1865.

Private, First Separate Company, July 26, 1875; Sergeant, Oct. 18, 1875; First Sergeant, Jan. 14, 1878; discharged April 9, 1881; Private, Third Separate Company, July 1, 1884; Sergeant, April 1, 1886; Second Lieutenant, Sept. 21, 1887.

N. Y.

FOURTH SEPARATE COMPANY.
Third Brigade.*Located on Post lane, near Main street, Yonkers, Westchester County.**Captain.*

John Isaac Pruyn, Nov. 26, 1887.

Private, Co. D, 16th Battalion, June 6, 1874; Corporal, March 11, 1876; Sergeant, Feb. 7, 1877; First Sergeant, Feb. 12, 1880; Sergeant-Major, March 23, 1880; honorably discharged Dec. 10, 1881; Private, Fourth Separate Company, Jan. 2, 1882; First Sergeant, March 2, 1882; Second Lieutenant, Feb. 1, 1884; First Lieutenant, Aug. 5, 1885; Captain, Nov. 26, 1887.

N. Y.

INFANTRY — FOURTH SEPARATE COMPANY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant.</i> William H. McVicar, Jan. 20, 1888....	.....	Private, Co. D, 16th Battalion (4th Separate Company), Sept. 4, 1874; Corporal, Feb. 12, 1880; Sergeant, Oct. 24, 1883; First Sergeant, March 13, 1884; Second Lieutenant, Aug. 5, 1885; First Lieutenant, Jan. 20, 1888.	N. Y.
<i>Second Lieutenant.</i> D. Griffin Smith, March 16, 1888.....	.....	Private, Co. D, 16th Battalion (4th Separate Company), Sept. 4, 1874; Corporal, May 6, 1887; Sergeant, Oct. 21, 1887; Second Lieutenant, March 16, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> .....	.....	.....	.....
FIFTH SEPARATE COMPANY.			
Third Brigade.			
<i>State Armory at Broadway, corner Johnson street, Newburgh, Orange County.</i>			
<i>Captain.</i> James T. Chase, March 17, 1881.....	Sergeant, Co. D, 19th Militia, mustered in U. S. service, May 26, 1862, for three months; discharged Sept. 6, 1862; First Lieutenant, Co. G, 168th N. Y. Vols. (19th Militia), Jan. 12, 1863, nine months; mustered out Oct. 31, 1863; Private, Co. A, 56th N. Y. Vols., Feb. 23, 1865; honorably discharged Oct. 17, 1865.	Private, Co. D, 10th N. Y. S. Militia, Sept. 22, 1858; Sergeant, May 26, 1862; First Lieutenant, March 28, 1866; Captain, Feb. 12, 1868; discharged by disbandment, May 9, 1878; Adjutant, 17th Battalion, Oct. 10, 1878; Captain, Co. A, March 17, 1881, which company became the Fifth Separate Company, Jan. 1, 1882.	N. Y.

<i>First Lieutenant.</i> John H. Wells, Nov. 23, 1883	Private, Co. E, 19th Regt., Sept. 6, 1869; disbanded, Feb., 1877; First Lieutenant, Co. C, 17th Battalion, July 25, 1878; Supernumerary, June 11, 1881; First Lieutenant, Fifth Separate Company, Nov. 23, 1883.	N. Y.
<i>Second Lieutenant.</i> George W. Dunn, Dec. 1, 1887	Private, Fifth Separate Company, Feb. 16, 1883; Sergeant, Dec. 3, 1884; Second Lieutenant, Dec. 1, 1887.	N. Y.
SIXTH SEPARATE COMPANY.		
Third Brigade.		
<i>State Armory, River street, near Ferry street, Troy, Rensselaer County.</i>		
<i>Captain.</i> James W. Cusack, Feb. 3, 1877; Brevet Lieutenant-Colonel, March 10, 1877.	Captain, Co. G, 24th Regt., Sept. 12, 1862; Major, Aug. 2, 1867; Lieutenant-Colonel, Jan. 6, 1869; honorably discharged Oct. 4, 1869; Captain, Sixth Separate Company, Feb. 3, 1877.	N. Y.
<i>First Lieutenant.</i> Elias P. Mann, Dec. 13, 1888.	Private, Sixth Separate Company, Jan. 22, 1877; Corporal, March 6, 1877; Quartermaster-Sergeant, Jan. 22, 1878; discharged March 3, 1882; Private, March 27, 1882; Quartermaster-Sergeant, March 31, 1882; returned to the ranks April 11, 1888; First Lieutenant, Dec. 13, 1888.	N. Y.
<i>Second Lieutenant.</i> Wait H. Stillman, Dec. 13, 1888	Private, Sixth Separate Company, Jan. 22, 1877; Quartermaster-Sergeant, March 6, 1877; Sergeant, Jan. 11, 1878; discharged March 23, 1882; Private, March 27, 1882; Sergeant, March 31, 1882; First Sergeant, Feb. 21, 1884; Second Lieutenant, Dec. 13, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Clarkson C. Schuyler, Aug. 23, 1883.	Assistant Surgeon, Sixth Separate Company, Aug. 23, 1883.	N. Y.

INFANTRY — (Continued).

SEVENTH SEPARATE COMPANY.

Third Brigade.

Located at Harmony Hotel, Cohoes, Albany County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Parker G. Tymerson, May 7, 1884.....	Private, Battery H, 3d Regt., N. Y. Volunteer Artillery, Oct. 15, 1861; Corporal, July, 1864; honorably discharged Nov. 24, 1864.	First Lieutenant, Seventh Separate Company, Jan. 9, 1882; Captain, May 7, 1884.	N. Y.
<i>First Lieutenant.</i> T. Campbell Collin, May 7, 1884.....	.....	Private, Third Separate Company, Feb. 24, 1876; Corporal, Jan. 23, 1878; First Sergeant, Oct. 5, 1878; honorably discharged June 8, 1881; Second Lieutenant, Seventh Separate Company, Feb. 21, 1881; First Lieutenant, May 7, 1884.	Eng.
<i>Second Lieutenant.</i> Thomas J. McNeil, June 20, 1884.....	.....	Private, Seventh Separate Company, May 15, 1880; Sergeant, April 18, 1882; First Sergeant, June 18, 1884; Second Lieutenant, June 20, 1884.	Ire.
<i>Assistant Surgeon—First Lieutenant.</i> James H. Mitchell, Nov. 10, 1886.....	.....	.....	.....
EIGHTH SEPARATE COMPANY.			
Fourth Brigade.			
<i>State Armory at Rochester, Monroe County.</i>			
<i>Captain.</i> Henry B. Henderson, July 12, 1865; Brevet Major, March 29, 1877.....	Second Lieutenant, 54th Regt., N. Y., one hundred days' service at Elmira, N. Y., July 26, 1864; discharged Nov. 10, 1864.	Private, Co. E, 54th Regt., Aug. 24, 1863; Second Lieutenant, March 2, 1864; Captain, July 12, 1865.	N. Y.

<i>First Lieutenant.</i> Frank J. Hess, March 12, 1886.	.....	Second Lieutenant, Eighth Separate Company, April 15, 1885; First Lieutenant, March 12, 1886.	N. Y.
<i>Second Lieutenant.</i> Frederick W. G. Bailey, March 2, 1887.	.....	Private, Eighth Separate Company, Oct. 2, 1878; Corporal, April 5, 1881; Sergeant, April 7, 1886; Second Lieutenant, March 2, 1897.	Can.
<i>Assistant Surgeon—First Lieutenant.</i> .....	.....	.....	.....
<p style="text-align: center;">NINTH SEPARATE COMPANY. Third Brigade. <i>Located at Whitehall, Washington County.</i></p>			
<i>Captain.</i> Thomas A. Paterson, Feb. 8, 1888.	.....	Private, Second Separate Company, April 27, 1876; Quartermaster-Sergeant, Nov. 12, 1877; honorably discharged (Ninth Separate Company), June 1, 1881; Private, Ninth Separate Company, June 13, 1881; Quartermaster-Sergeant, June 20, 1881; First Sergeant, Dec. 11, 1882; First Lieutenant, June 15, 1887; Captain, Feb. 8, 1888.	N. Y.
<i>First Lieutenant.</i> Lemuel W. Finch, March 15, 1888.	.....	Private, Ninth Separate Company, Nov. 12, 1878; Corporal, April 12, 1880; Sergeant, Dec. 11, 1882; Quartermaster-Sergeant, March 10, 1884; First Lieutenant, March 15, 1888.	N. Y.
<i>Second Lieutenant.</i> Ernest A. Greenough, Feb. 8, 1888.	.....	Private, Ninth Separate Company, Jan. 11, 1881; Corporal, June 20, 1881; Sergeant, April 15, 1884; honorably discharged Feb. 11, 1886; reën- listed Nov. 19, 1887; Second Lieutenant, Feb. 8, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Benjamin C. Senton, April 4, 1884.	.....	Private, Ninth Separate Company, April 27, 1876; honorably discharged June 1, 1881; Assistant Surgeon, April 4, 1884.	N. Y.

INFANTRY — (Continued).

TENTH SEPARATE COMPANY.

Third Brigade.

State Armory at Newburgh, Orange County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
Joseph M. Dickey, May 7, 1888. <i>1st Captain.</i>	Private, 19th N. Y. S. Militia, in U. S. service May 26, 1862; honorably discharged Sept. 6, 1862; Private and Sergeant, Co. I, 168th N. Y. Vols. (19th Militia), Oct. 1, 1862; honorably discharged Oct. 31, 1863; Private, Co. M, 15 Artillery, Jan. 29, 1864; Sergeant; Second Lieutenant, Aug. 23, 1864; First Lieutenant, May 30, 1865; honorably discharged Aug. 22, 1865; State Brevet of Captain, N. Y. Vols.	Private, 19th N. Y. S. Militia, May 26, 1862; Sergeant, Oct. 1, 1862; honorably discharged Oct. 31, 1863; Captain, Tenth Separate Company, Sept. 13, 1878; resigned Nov. 18, 1884; Captain, May 7, 1888.	N. Y.
William J. Whited, Jan. 17, 1887. <i>First Lieutenant.</i>	.....	Private, Co. E, 17th Battalion, Jan. 2, 1880; Corporal, Tenth Separate Company, March 31, 1884; Second Lieutenant, May 17, 1886; First Lieutenant, Jan. 17, 1887.	N. Y.
Thomas T. Haviland, April 4, 1887. <i>Second Lieutenant.</i>	.....	Private, Tenth Separate Company, Oct. 1, 1883; Corporal, Jan. 7, 1885; Second Lieutenant, April 4, 1887.	N. Y.

ELEVENTH SEPARATE COMPANY.

Third Brigade.

*Armory at Fourth Avenue Hall, Mt. Vernon, Westchester County.**Captain.*

Isaac N. Pressey, Dec. 21, 1885.....

Second Lieutenant, Co. B, 3d Regt., Conn. N. G.,
Jan. 19, 1872; First Lieutenant, Feb. 5, 1872;
honorably discharged, Sept. 30, 1872; First Lieu-
tenant, Eleventh Separate Company, Dec. 10,
1884; Captain, Dec. 21, 1885.

Conn.

First Lieutenant.

Edward J. Kindler, Dec. 21, 1885.....

N. Y.

*Second Lieutenant.**Assistant Surgeon—First Lieutenant.*Stuart B. Carlisle, June 14, 1883..... Assistant Surgeon and First Lieutenant, June
14, 1883. N. Y.

INFANTRY — (Continued).

TWELFTH SEPARATE COMPANY.

Third Brigade.

State Armory on River street, between Congress and Ferry streets, Troy, Rensselaer County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Joseph Egolf, May 18, 1876; Brevet Colonel, April 16, 1877.....	Private Co. D, 2d N. Y. Vols., April 19, 1861; First Sergeant, May 14, 1861; Second Lieutenant, Sept. 16, 1861; First Lieutenant, Aug. 31, 1862; Captain, Nov. 10, 1862; hon- orably discharged May 23, 1863; First Lieutenant, 125th N. Y. Vols., March 28, 1864. Captain, May 8, 1864; Major, Nov. 10, 1864; hono- rably discharged (loss of right arm), Jan. 5, 1865; State Brevet Lieut.- Colonel, N. Y. Vols., May 13, 1866.	Lieutenant-Colonel and Ordnance Officer, 3d Div. N. G., S. N. Y., May 4, 1867; Colonel and Engi- neer, 3d Div., Sept. 25, 1872; Chief of Artil- lery, Oct. 6, 1873; resigned April 28, 1876; Captain, Fourth (now Twelfth) Separate Company, May 18, 1876.	Pa.

<i>First Lieutenant.</i> John Tallmadge, July 16, 1888.	Private, Co. A, 25th Regt., N. G., S. N. Y., May 31, 1862; discharged Sept. 8, 1862; Private, Co. A, 24th Regt., N. G., S. N. Y., June 28, 1863; Corporal, Oct. 4, 1865; First Sergeant, Feb. 7, 1866; First Lieutenant, July 2, 1866; First Lieutenant, Battery B, April 13, 1867; First Lieutenant and Aide-de-Camp, 10th Brigade, Jan. 19, 1871; Captain and Quartermaster, 10th Brigade, Jan. 29, 1871; Major and Engineer, Oct. 15, 1872; Brevet Lieutenant-Colonel, June 26, 1876; Supernumerary, Dec. 8, 1877; Private, Battery F, July 1, 1878; First Sergeant, same date; Second Lieutenant, Jan. 20, 1879; resigned June 28, 1881; Private, 4th Battery, June 9, 1884; First Sergeant, July 19, 1884; First Lieutenant, Feb. 9, 1885; resigned April 29, 1886; First Lieutenant, Twelfth Separate Company, July 16, 1888.	N. Y.
<i>Second Lieutenant.</i> Alonzo W. Hill, June 23, 1886.	Private, 34th N. Y. Vols.	N. Y.

THIRTEENTH SEPARATE COMPANY.

Fourth Brigade.

Armory in Opera House at Jamestown, Chautauqua County.

Henry Smith, May 31, 1887.	<i>Captain.</i> Captain, Thirteenth Separate Company, May 31, 1887.	N. Y.
Reuben E. Fenton, Nov. 28, 1887.	<i>First Lieutenant.</i> First Lieutenant, Thirteenth Separate Company, Nov. 28, 1887.	N. Y.
Frederick W. Hyde, Nov. 28, 1887.	<i>Second Lieutenant.</i> .....	.....
<i>First Lieutenant and Assistant Surgeon.</i> William Marvin Bemis, Sept. 23, 1887.	Assistant Surgeon, Thirteenth Separate Company, Sept. 23, 1887.	Pa.

INFANTRY — (Continued).

FOURTEENTH SEPARATE COMPANY.

Third Brigade.

Armory at Union Avenue, Kingston, Ulster County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> John G. Van Euten, Jan. 25, 1888.....	Private, Fourteenth Separate Company, Nov. 29, 1883; Corporal, April 3, 1884; Second Lieutenant, Sept. 3, 1885; First Lieutenant, April 14, 1887; Captain, Jan. 25, 1888.	N. Y.
<i>First Lieutenant.</i> Robert F. Tompkins, Mar. 15, 1888.....	First Lieutenant, Fourteenth Separate Company, Mar. 15, 1888.	N. Y.
<i>Second Lieutenant.</i> Theodore DuBois Frear, Nov. 3, 1887.....	Private, Co. D, 2d Battalion, Colorado N. G., 1882; Second Lieutenant from June to Sept. 1, 1883; Second Lieutenant, Fourteenth Separate Company, Nov. 3, 1887.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Charles W. Crispell, Nov. 20, 1883.....	Assistant Surgeon, Fourteenth Separate Company, Nov. 20, 1883.	N. Y.

FIFTEENTH SEPARATE COMPANY.

Third Brigade.

*Armory, from 278 to 282 Main street, Poughkeepsie, Dutchess County.**Captain.*

Berthold Myers, Sept. 11, 1879.....	Private, Co. D, 57th N. Y. Vols., Oct. 12, 1861; honorably discharged (loss of right arm), Dec. 13, 1862.	Private, Co. A, 21st Regt., Sept. 11, 1874; Second Lieutenant, Co. F, Oct. 20, 1876; First Lieut- enant, Co. A, May 24, 1878; Captain, Co. A (now Fifteenth Separate Company), Sept. 11, 1879. First Lieutenant, Fifteenth Separate Company, June 6, 1888.	Ger. N. Y.
Francis B. Waring, June 6, 1888.....			
<i>Second Lieutenant.</i>			

SIXTEENTH SEPARATE COMPANY.

Third Brigade.

*Armory, Corner Main and William streets, Catskill, Greene County.**Captain.*

Arthur M. Murphy, Feb. 24, 1883.....		First Lieutenant, Sixteenth Separate Company, Oct. 22, 1879; Captain, Feb. 24, 1883.	Mass.
<i>First Lieutenant.</i>			
Frank E. Van Gorden, Feb. 16, 1888.....		Private, Sixteenth Separate Company, Oct. 22, 1879; Corporal, Dec. 1, 1879; First Lieutenant, Feb. 16, 1888.	N. Y.
<i>Second Lieutenant.</i>			
Charles E. Nichols, June 2, 1888.....		Private, Sixteenth Separate Company, Feb. 11, 1886; Second Lieutenant, June 2, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i>			
William P. McLawry, May 11, 1883....	Private, Co. B, 144th N. Y. Vols., Aug. 25, 1864; honorably dis- charged June 25, 1865.	Private, Sixteenth Separate Company, Oct. 22, 1879; First Lieutenant and Assistant Surgeon, May 11, 1883.	N. Y.

INFANTRY — (Continued).

SEVENTEENTH SEPARATE COMPANY.

Second Brigade.

Armory on Broadway, Corner Lawrence Avenue, Flushing, Queens County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Thomas Miller, Jr., Feb. 25, 1880.	First Lieutenant, Seventeenth Separate Company, June 20, 1878; Captain, Feb. 25, 1880.	N. Y.
<i>First Lieutenant.</i> Frank N. Bell, March 1, 1887.	Private, Seventeenth Separate Company, Sept. 18, 1879; First Sergeant, Feb. 10, 1880; First Lieutenant, March 1, 1887.	Conn.
<i>Second Lieutenant.</i> John J. Simmons, June 12, 1888.	Private, Seventeenth Separate Company, July 18, 1876; Sergeant, Dec. 9, 1878; Second Lieutenant, June 12, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Abbots C. Combes, May 21, 1888.
EIGHTEENTH SEPARATE COMPANY.			
Third Brigade.			
Armory in Opera House Block, Glens Falls, Warren County.			
<i>Captain.</i> James S. Garrett, Feb. 2, 1880.	Private, Co. A, 18th N. Y. Vols., Aug. 10, 1862; First Sergeant, Aug. 29, 1862; Second Lieutenant, Feb. 13, 1863; First Lieutenant, March 8, 1864; honorably discharged Oct. 11, 1865; Brevet Captain, N. Y. Vols.	Captain, Eighteenth Separate Company, Feb. 2, 1880.	N. Y.

<i>First Lieutenant.</i> John H. Leonard, May 7, 1886.....	Private, Co. A, 2d N. Y. Vet. Cav., Aug. 29, 1863; Corporal, Feb. 1865; discharged Nov. 8, 1865.	Private, Eighteenth Separate Company, Jan. 21, 1879; Second Lieutenant, April 30, 1879; First Lieutenant, May 7, 1886.	N. Y.
<i>Second Lieutenant.</i> Emmett J. Gray, Jan. 2, 1888		Private, Eighteenth Separate Company, Feb. 11, 1884; Corporal, June 6, 1885; Second Lieutenant, Jan. 2, 1888.	N. Y.
<i>First Lieutenant and Assistant Surgeon.</i> Fred. B. Streeter, Jan. 7, 1887.....		First Lieutenant and Assistant Surgeon, Jan. 7, 1887.	N. Y.

NINETEENTH SEPARATE COMPANY.

Third Brigade.

Armory, 278 to 282 Main street, Poughkeepsie, Dutchess County.

<i>Captain.</i> Wm. Haubennestel, Nov. 12, 1866; Brevet-Major, Feb. 2, 1876....	Second Lieutenant, Co. D, 21st N. G., S. N. Y., in U. S. service for thirty days, June 22 to Aug. 6, 1863.	Private, Co. D, 21st Regt., May 2, 1860; Sergeant, July 2, 1861; First Sergeant, July 3, 1862; Second Lieutenant, Nov. 3, 1862; First Lieutenant, April 2, 1866; Captain, Nov. 12, 1866.	N. Y.
<i>First Lieutenant.</i> Louis P. Haubennestel, Aug. 6, 1873..		Private, Co. D, 21st Regt., June 26, 1862; Corporal, July, 1863; Sergeant, July 5, 1865; First Sergeant, July 11, 1866; Second Lieutenant, Aug. 9, 1871; First Lieutenant, Aug. 6, 1873.	N. Y.
<i>Second Lieutenant.</i> Martin L. Beutell, Jan. 2, 1878.	Private, 58th N. Y. Vols., Sept. 1, 1861; Corporal, Oct. 1, 1864; hon- orably discharged Oct. 1, 1865.	Private, Co. D, 21st Regt., June 3, 1867; Sergeant, July 6, 1870; First Sergeant, July 3, 1872; Second Lieutenant, Jan. 2, 1878.	N. J.
<i>Assistant Surgeon—First Lieutenant.</i> John P. Wilson, Sept. 20, 1883.....		Private, Co. I, 27th Regt., Aug. 20, 1861; Sergeant, Oct. 1, 1861; discharged for disability in 1863; Assistant Surgeon, Nineteenth Separate Company, Sept. 20, 1883.	N. Y.

INFANTRY — (Continued).

TWENTIETH SEPARATE COMPANY.

Third Brigade.

Armory at Binghamton, Broome County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Hiram C. Rogers, May 27, 1884.....	Captain, 27th N. Y. Vols., May 21, 1861; March, 1862; Captain and Assistant Adjutant-General, U. S. Vols.; Major and Assistant Adjutant-General, July 4, 1862; Lieutenant-Colonel and Assistant Adjutant-General, Nov., 1862; resigned Jan. 31, 1865; Brevet Brigadier-General, U. S. Vols., March 13, 1865.	Captain, Twentieth Separate Company, May 27, 1884.	N. Y.
<i>First Lieutenant.</i> Charles F. Tupper, May 24, 1883.....	.....	Private, Twentieth Separate Company, March 11, 1878; Corporal, Aug. 14, 1879; Sergeant, July 28, 1881; honorably discharged, April 9, 1883; Private, April 13, 1883; First Lieutenant, May 24, 1883.	N. Y.
<i>Second Lieutenant.</i> Frank D. Lyon, July 2, 1883.....	.....	Adjutant, 44th Regt., March 21, 1877; disbanded Dec. 8, 1877; Second Lieutenant, Twentieth Separate Company, July 2, 1883.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Daniel S. Burr, May 31, 1883.....	.....	Surgeon, 28th Brigade, Oct. 15, 1875; discharged, Dec. 8, 1877; First Lieutenant and Assistant Surgeon, Twentieth Separate Company, May 31, 1883.	N. Y.

TWENTY-FIRST SEPARATE COMPANY.

Third Brigade.

State Armory on River, between Congress and Ferry streets, Troy.

James H. Lloyd, March 15, 1888. <i>Captain.</i>	Private, Sixth Separate Company, Dec. 8, 1882; honorably discharged Dec. 12, 1887; reenlisted Private, Sixth Separate Company, Dec. 13, 1887; Captain, Twenty-first Separate Company, Mar. 15, 1888.	N. Y.
Merrill M. Dunsbaugh, Mar. 15, 1888. <i>First Lieutenant.</i>	Private, Twenty-first Separate Company, March 1, 1877; Corporal, Oct., 1879; First Sergeant, Sept., 1881; discharged Feb. 21, 1883; Private, March 1, 1883; First Sergeant, April 16, 1883; Second Lieutenant, Oct. 13, 1884; First Lieutenant, March 15, 1888.	N. Y.
Michael Sullivan, May 22, 1888. <i>Second Lieutenant.</i>	Private and Corporal, Twenty-first Separate Company, 1883; Sergeant, April 16, 1883; First Sergeant, March 1, 1885; Second Lieutenant, May 22, 1888.	Ire.

TWENTY-SECOND SEPARATE COMPANY.

Third Brigade.

Armory at Town Hall, Saratoga Springs, Saratoga County.

Robert C. McEwen, May 28, 1883. <i>Captain.</i>	Assistant Surgeon, 17th Conn. Vols., August 16, 1862; resigned Sept. 30, 1863.	N. Y.
Arthur Louis Hall, Jan. 26, 1885. <i>First Lieutenant.</i>	Second Lieutenant, Twenty-second Separate Company, May 28, 1883; First Lieutenant, January 26, 1885.	N. Y.
Waldo L. Rich, April 20, 1885. <i>Second Lieutenant.</i>	Private, Twenty-second Separate Company, Nov. 25, 1884; Corporal, Jan. 24, 1885; Second Lieutenant, April 20, 1885.	N. Y.

INFANTRY — (Continued).

TWENTY-THIRD SEPARATE COMPANY.

Armory in rear of Court-house at Hudson, Columbia County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Charles F. T. Beale, Dec. 15, 1887.....	.....	Private, Twenty-third Separate Company, Sept. 7, 1880; Quartermaster-Sergeant, Nov. 20, 1884; Captain, Dec. 15, 1887.	N. Y.
<i>First Lieutenant.</i> Reuben Reynolds, Dec. 14, 1880.....	Private, Co. A, 128th N. Y. Vols., Aug. 2, 1862; Corporal, Aug. 10, 1862; Sergeant, Feb. 10, 1863; discharged, Aug. 30, 1863; First Lieutenant, Co. A, 19th Regt., Corps D'Afrique (later 90th Regt., U. S. colored troops), Sept. 19, 1863; discharged Sept. 20, 1864.	Sergeant, Twenty-third Separate Company, May 24, 1878; First Sergeant, Dec. 16, 1878; Second Lieutenant, Feb. 4, 1879; First Lieutenant, Dec. 14, 1880.	N. Y.
<i>Second Lieutenant.</i> Henry Waterman, Nov. 16, 1886.....	.....	Private, Twenty-third Separate Company, May 24, 1878; Corporal, August 6, 1878; Sergeant, Sept. 8, 1882; First Sergeant, May 28, 1885; Second Lieutenant, Nov. 16, 1886.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Crawford E. Fritts, April 23, 1883.....	.....	Private, Twenty-third Separate Company, May 24, 1878; First Lieutenant and Assistant Surgeon, April 23, 1883.	N. Y.

TWENTY-FOURTH SEPARATE COMPANY.

Third Brigade.

Armory, Middletown, Orange County.

<i>Captain.</i> Charles B. Wood, March 17, 1887.	Private, Co. I; 71st Militia, April 19, 1861, to May 31, 1861; First Lieutenant, 124th N. Y. Vols., Aug. 12, 1862; Captain, July 2, 1863; discharged Sept. 21, 1864; Brevet Major, N. Y. Vols.	Captain, Twenty-fourth Separate Company, March 17, 1887.	N. Y.
<i>First Lieutenant.</i> Amos E. McIntyre, March, 17, 1887. ....	.....	First Lieutenant, Twenty-fourth Separate Company, March 17, 1887.	N. Y.
<i>Second Lieutenant.</i> Lewis S. Stivers, March 17, 1887. ....	.....	Second Lieutenant, Twenty-fourth Separate Company, March 17, 1887.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Joseph O. Reed, March 17, 1888. ....	.....	First Lieutenant and Assistant Surgeon, Twenty-fourth Separate Company, March 17, 1888.	N. Y.

TWENTY-SIXTH SEPARATE COMPANY.

Fourth Brigade.

Armory in the Academy of Music at Corner of Buldwin and Carroll streets, Elmira, Chemung County.

<i>Captain.</i> Robert P. Bush, Dec. 1, 1887.	Private, 12th N. Y. Vols., April 21, 1861, to May 17, 1863; Captain, 185th N. Y. Vols., Sept. 2, 1864; Major, Dec. 3, 1864; discharged May 29, 1865.	Captain, 110th Battalion, N. G., S. N. Y., Sept. 7, 1875; Major, Dec. 11, 1875; Supernumerary, Nov. 28, 1878; Major and Surgeon, 7th Brigade, Dec. 6, 1884; Supernumerary, Aug. 5, 1885; Captain, Twenty-sixth Separate Company, Dec. 1, 1887.	N. Y.
<i>First Lieutenant.</i> .....	.....	.....	.....
<i>Second Lieutenant.</i> Fred J. Jones, Dec. 21, 1887. ....	.....	Private, Twenty-sixth Separate Company, Nov. 28, 1884; Corporal, May 19, 1886; Sergeant, March 2, 1887; Second Lieutenant, Dec. 21, 1887.	N. Y.

INFANTRY — TWENTY-SIXTH SEPARATE COMPANY — (*Continued*).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant and Assistant Surgeon.</i> Floyd B. Parke, May 20, 1887.....	Private, Thirtieth Separate Company, Jan. 22, 1886; Assistant Surgeon, Twenty-sixth Separate Company, May 20, 1887.	N. Y.
TWENTY-SEVENTH SEPARATE COMPANY.			
Third Brigade.			
<i>Armory on Webster street, Malone, Franklin County.</i>			
<i>Captain.</i> George W. Crooks April 6, 1888.....	Private, Twenty-seventh Separate Company, July 22, 1878; Sergeant, June 13, 1884; First Lieutenant, Oct. 6, 1887; Captain, April 6, 1888.	Pa.
<i>First Lieutenant.</i> Sylvester E. Gregg, June 12, 1888	Private, Twenty-seventh Separate Company, Feb. 6, 1879; Corporal, Sept. 2, 1882; Sergeant, June 13, 1884; First Sergeant, Nov. 3, 1887; First Lieutenant, June 12, 1888.	Vt.
<i>Second Lieutenant.</i> Frank D. Allen, Jan. 6, 1888.....	Private, Twenty-seventh Separate Company, Jan. 19, 1886; Corporal, June 2, 1887; Sergeant, Nov. 10, 1887; Second Lieutenant, Jan. 6, 1888.	N. Y.

TWENTY-EIGHTH SEPARATE COMPANY.

Third Brigade.

State Armory, at Utica, Oneida County.

<i>Captain.</i> Joseph H. Remmer, June 3, 1873.....	Private, Co. B, 26th Regt., Sept. 2, 1868; Sergeant, Sept. 2, 1868; transferred to Co. C, March 10, 1873; Captain, Co. C, 26th Battalion, June 3, 1873.	N. Y.
<i>First Lieutenant.</i> Charles F. Clark, May 29, 1876.....	Private, Co. C, 26th Battalion, June 3, 1873; Sergeant in Jan., 1874; Second Lieutenant, Feb. 8, 1875; First Lieutenant, May 29, 1876.	Eng.
<i>Second Lieutenant.</i> Alfred T. Rycraft, July 28, 1884.....	Private, Twenty-eighth Separate Company, April 2, 1883; Second Lieutenant, July 28, 1884.	Eng.
<i>Assistant Surgeon—First Lieutenant.</i> James H. Glass, Jan. 18, 1888.....	.....	.....

TWENTY-NINTH SEPARATE COMPANY.

Fourth Brigade.

State Armory at Oswego, Oswego County.

<i>Captain.</i> Hugh H. Herron, March 1, 1877.....	Private, 24th N. Y. vols., April 19, 1861; discharged as Sergeant, June 2, 1863.	Ire.
<i>First Lieutenant.</i> William Monaghan, Feb. 23, 1887.....	Private, Battery A, 4th U. S. Artillery, Feb. 6, 1861; Corporal, Aug. 10, 1861; Sergeant, Nov. 15, 1861; discharged Feb. 6, 1866; re-enlisted same day, Battery A, 1st U. S. Artillery; Corporal, Nov. 1, 1866; Sergeant, Nov. 1, 1867; discharged Feb. 6, 1881.	Ire.
<i>Second Lieutenant.</i> George A. Glynn, Oct. 17, 1887.....	Second Lieutenant, Twenty-ninth Separate Company, Oct. 17, 1887.	N. Y.

INFANTRY — TWENTY-NINTH SEPARATE COMPANY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant and Assistant Surgeon.</i>			
THIRTIETH SEPARATE COMPANY.			
Fourth Brigade.			
<i>Armory on Carroll, between Lake and Baldwin streets, Elmira, Chemung County.</i>			
<i>Captain.</i>			
Roscius Morse, Feb. 5, 1885.		Private Thirtieth Separate Company, Oct. 1, 1874; Corporal, Oct. 1, 1874; Sergeant, March 3, 1876; Captain, Feb. 5, 1885.	N. Y.
<i>First Lieutenant.</i>		Private, Co. D, 110th Battalion, Oct. 1, 1874; Second Lieutenant, April 7, 1877; First Lieutenant, Thirtieth Separate Company, Nov. 29, 1881; Lieutenant-Colonel and Assistant Adjutant-General, 7th Brig., Dec. 6, 1884; Supernumerary, Aug. 5, 1886; First Lieutenant, Thirtieth Separate Company, May 11, 1887.	N. Y.
<i>Second Lieutenant.</i>		Corporal, Co. D, 110th Battalion, Oct. 1, 1874; Sergeant, March 3, 1876; First Sergeant, April 7, 1877; Second Lieutenant, Thirtieth Separate Company, Nov. 29, 1881; Major and Inspector, 7th Brigade, Dec. 6, 1884; Supernumerary, Aug. 5, 1886; First Lieutenant, Thirtieth Separate Company, May 11, 1887.	N. Y.
John T. Saddler, May 11, 1887			

THIRTY-FIRST SEPARATE COMPANY.

Third Brigade.

Armory on Otsego street, Mohawk, Herkimer County.

<i>Captain.</i> Andrew I. Budlong, May 20, 1884.....	.....	.....	.....	.....	N. Y.
<i>First Lieutenant</i> Delos M. Dodge, Feb. 8, 1886.....	.....	.....	.....	Private, Thirty-first Separate Company, Nov. 18, 1878; Corporal, Jan. 13, 1879; First Sergeant, May 24, 1880; discharged, Dec. 21, 1883; Private, Feb. 4, 1884; First Sergeant, June 12, 1884, First Lieutenant, Feb. 8, 1886.	
<i>Second Lieutenant.</i> James M. Bellinger, Dec. 6, 1880.....	.....	.....	.....	Private, Thirty-first Separate Company, March 8, 1879; Second Lieutenant, Dec. 6, 1880.	N. Y.

THIRTY-SECOND SEPARATE COMPANY.

Third Brigade.

Armory, Hoosick Falls, Rensselaer County.

<i>Captain.</i> Charles W. Eddy, March 20, 1885.....	.....	.....	.....	Captain, March 20, 1885.....	N. Y.
<i>First Lieutenant.</i> Frank L. Stevens, March 20, 1885.....	.....	.....	.....	First Lieutenant, March 20, 1885.....	N. Y.
<i>Second Lieutenant.</i> George H. Walden, March 20, 1885.....	.....	.....	.....	Second Lieutenant, March 20, 1885.....	Mass.
<i>First Lieutenant and Assistant Surgeon.</i> Lourie Ashton, Aug. 20, 1887.....	.....	.....	.....	Assistant Surgeon, Thirty-second Separate Company, Aug. 20, 1887.	Iowa.

INFANTRY — (Continued).

THIRTY-THIRD SEPARATE COMPANY.

Third Brigade.

Armory on Delaware street, at Walton, Delaware County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Matthew W. Marvin, May 20, 1879...	First Lieutenant, Co. B, 144th N. Y. vols., Sept. 1, 1862; Captain, March 3, 1863; honorably discharged June 25, 1865.	Adjutant, 100th Regt., July 1, 1866; Major, July 20, 1867; Supernumerary, June 5, 1868; Captain, Thirty-third Separate Company, May 20, 1879.	N. Y.
<i>First Lieutenant.</i> Harvey B. Moremus, May 20, 1879...	Private, Co. E, 3d N. Y. vol. cavalry, Aug. 22, 1861; re-enlisted as a veteran in the field, Jan. 4, 1864; Corporal, Sept. 8, 1864; Sergeant, Sept. 13, 1864; honorably discharged July 12, 1865.	First Lieutenant, Thirty-third Separate Company, May 20, 1879.	N. Y.
<i>Second Lieutenant.</i> Julius W. St. John, April 6, 1888...	.....	Private, Thirty-third Separate Company, May 29, 1879; dropped, April 21, 1880; Reënlisted, March 5, 1887; Second Lieutenant, April 6, 1888.	N. Y.
<i>First Lieutenant and Assistant Surgeon.</i> William B. Morrow, Sept. 10, 1886...	.....	First Lieutenant and Assistant Surgeon, Thirty-third Separate Company, Sept. 10, 1886.	N. Y.

THIRTY-FOURTH SEPARATE COMPANY.

Fourth Brigade.

*Armory on Union Alley, near Seneca street, at Geneva, Ontario County.**Captain.*

William Wilson, Oct. 6, 1884.....

First Lieutenant.

George C. Schell, Nov. 7, 1884.....

Second Lieutenant.

Frederick A. Malette, Feb. 3, 1887.....

Private, Thirty-fourth Separate Company, Jan. 21, 1880; First Lieutenant, Feb. 23, 1882; Captain, Oct. 6, 1884.

N. Y.

Private Thirty-fourth Separate Company, Jan. 21, 1880; First Lieutenant, Nov. 7, 1884.

N. Y.

Private, Thirty-fourth Separate Company, Jan. 21, 1880; First Sergeant, 1885; Second Lieutenant, Feb. 3, 1887.

N. Y.

THIRTY-FIFTH SEPARATE COMPANY.

Third Brigade.

*Armory at Ogdensburgh, St. Lawrence County.**Captain.*

Henry Holland, Feb. 8, 1887.....

First Lieutenant.

Ernest S. Brown, June 5, 1888.....

Second Lieutenant.

Dennis B. Lucey, July 14, 1887.....

Assistant Surgeon—First Lieutenant.

John W. Benton, April 28, 1887.....

First Lieutenant, Thirty-fifth Separate Company, Nov. 9, 1885; Captain, Feb. 8, 1887.

N. Y.

Private, Thirty-fifth Separate Company, Nov. 18, 1885; Sergeant, Dec. 29, 1885; First Lieutenant, June 5, 1888.

N. Y.

Private, Thirty-fifth Separate Company, Nov. 18, 1885; First Sergeant, Dec. 29, 1885; Second Lieutenant, July 14, 1887.

Mass.

Assistant Surgeon, Thirty-fifth Separate Company, April 28, 1887.

N. Y.

INFANTRY — (Continued).

THIRTY-SIXTH SEPARATE COMPANY.

Third Brigade.

Armory on Park, at Junction of State and Albany streets, Schenectady, Schenectady County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Austin A. Yates, June 12, 1880	Captain, Co. H, 134th N. Y. vols., Sept. 22, 1862; honorably discharged June 9, 1863; Captain, Veteran Reserve Corps, Aug. 18, 1863; mustered out, Aug. 6, 1866; Brevet Major, U. S. vols.	Captain, Thirty-sixth Separate Company, June 12, 1880.	N. Y.
<i>First Lieutenant.</i> James F. White, Nov. 8, 1883	Private, Co. A, 192d N. Y. vols., Feb. 15, 1865; discharged Aug. 13, 1865; Private, Co. E, 4th U. S. cavalry, Sept. 26, 1872; Sergeant; discharged Sept. 1877.	Private, Thirty-sixth Separate Company, May 31, 1880; Sergeant, June 12, 1880; First Sergeant; Second Lieutenant, June 15, 1881; First Lieutenant, Nov. 8, 1883.	N. Y.
<i>Second Lieutenant.</i> J. Edward Swanker, June 1, 1886 .....	.....	Second Lieutenant, Thirty-sixth Separate Company, June 1, 1886.	N. Y.
<i>First Lieutenant and Assistant Surgeon.</i> Wm. T. Clute, Dec. 31, 1883 .....	.....	Assistant Surgeon, Thirty-sixth Separate Company, Dec. 31, 1883.	N. Y.

THIRTY-SEVENTH SEPARATE COMPANY.

Third Brigade.

*Armory on Park, at Junction of State and Albany streets, Schenectady.**Captain.**First Lieutenant.*

Thomas Gregg, March 15, 1882.....

Second Lieutenant.

James H. Vedder, July 29, 1882.....

Second Lieutenant, Thirty-seventh Separate Com-
pany, June 12, 1880; First Lieutenant, March 15,
1882.....First Sergeant, Thirty-seventh Separate Company,
June 12, 1880; Second Lieutenant, July 29, 1882.....

N. Y.

N. Y.

THIRTY-EIGHTH SEPARATE COMPANY.

Fourth Brigade.

*State Armory at Oswego, Oswego County.**Captain.*

Frank J. Stearns, March 11, 1886.....

First Lieutenant.

DeSolve H. Tift, July 12, 1886.....

Private, Co. F, 48th Regt. (now Thirty-eighth Sep-
arate Company), Jan. 7, 1878; Sergeant, June 22,
1878; Second Lieutenant, Feb. 26, 1884; First
Lieutenant, July 25, 1884; Captain, March 11,
1886.....Private, Co. A, 48th Regt., March 17, 1870; dis-
charged, Jan. 31, 1879; Private, Co. F, 48th Regt.
(Thirty-eighth Separate Company), May 2, 1879;
Corporal, July 26, 1881; Sergeant, April 25, 1883;
First Sergeant, May 10, 1884; discharged, Sept. 2,
1884; First Lieutenant, Thirty-eighth Separate
Company, July 12, 1886.....

N. Y.

N. Y.

Second Lieutenant.

INFANTRY — (Continued).
THIRTY-NINTH SEPARATE COMPANY.
Third Brigade.
State Armory at Watertown, Jefferson County.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Captain.</i> Wm. R. Zimmerman, April 13, 1888.....	Private, Co. C, 35th Battalion, Dec. 11, 1877; Sergeant, June 24, 1881; First Sergeant (Thirty-ninth Separate Company), Oct. 6, 1885; Captain, April 13, 1888.	N. Y.
<i>First Lieutenant.</i> James S. Boyer, April 13, 1888.....	Private, Co. C, 35th Battalion (Thirty-ninth Separate Company), March 29, 1881; Corporal, April 9, 1883; Sergeant, June 7, 1884.	N. Y.
<i>Second Lieutenant.</i>
<i>Assistant Surgeon—First Lieutenant.</i> Mason L. Smith, Oct. 23, 1883.....	Private, Thirty-ninth Separate Company, March 7, 1882; First Lieutenant and Assistant Surgeon, Oct. 23, 1883.	N. Y.

FORTIETH SEPARATE COMPANY.
Fourth Brigade.
State Armory at Syracuse, Onondaga County.

Captain.
.....

First Lieutenant.

James Myall, July 5, 1887. Eng.

Private, Co. D, 51st Regt., Oct. 6, 1863; Sergeant, Oct. 4, 1864; First Sergeant, Sept. 25, 1866; discharged Oct. 25, 1871; Private, Co. G, 51st Regt., Oct. 15, 1881; Corporal, Forty-second Separate Company, Jan. 9, 1882; discharged Feb. 15, 1883; Private, Fortieth Separate Company, March 28, 1887; First Lieutenant, July 15, 1887.

Second Lieutenant.

George F. Chatterton, May 26, 1884.

Private, Co. I, 51st Regt., Jan. 24, 1873; First Sergeant, Jan. 30, 1874; Second Lieutenant, Jan. 16, 1875; First Lieutenant, March 27, 1878; Captain, Dec. 5, 1878; Supernumerary, Jan. 2, 1879; Second Lieutenant, Fortieth Separate Company, May 26, 1884.

Assistant Surgeon—First Lieutenant.

Adelbert D. Head, May 12, 1883. N. Y.
Private, 1st N. Y. vol. eng., July 1, 1861; discharged Nov. 4, 1864. First Lieutenant and Assistant Surgeon, Fortieth Separate Company, May 12, 1883.

FORTY-FIRST SEPARATE COMPANY.

Fourth Brigade.

*State Armory at Syracuse, Onondaga County.**Captain.*

John G. Butler, April 12, 1888. N. Y.

Captain, 3d N. Y. vols., April 21, 1861; Lieutenant-Colonel, 147th N. Y. vols., Sept. 13, 1862; Colonel, 147th N. Y. vols., Feb. 4, 1863; honorably discharged Nov. 5, 1883.

INFANTRY — FORTY-FIRST SEPARATE COMPANY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant.</i> Mark J. Blakely, Sept. 24, 1885.....	Private, Co. E, 28th N. Y. vols., 1861; discharged June 2, 1862; Private, Co. G, 97th N. Y. vols., Sept. 25, 1863; Principal Musician, April 25, 1865; discharged July 18, 1865.	Private, Co. A, 29th Regt., Nov., 1870; transferred to 44th Battalion, 1874; First Lieutenant, Co. C, Aug. 24, 1876; resigned, May 23, 1877; Private, Co. D, 51st Regt., Dec., 1877; Second Lieutenant, March 5, 1878; First Lieutenant, June 7, 1878; resigned, Aug., 1878; Ordnance Sergeant, 51st Regt., Sept., 1878; Private, Co. B, 51st Regt., Dec. 19, 1879; Company Quartermaster-Sergeant, same date; discharged April, 1882; Private, Forty-first Separate Company, Nov., 1882; First Sergeant, same date; discharged Jan. 22, 1885; First Lieutenant, Fortieth Separate Company, Sept. 24, 1885; First Lieutenant, Forty-first Separate Company, April 22, 1887, with original rank.	N. Y.
<i>Second Lieutenant.</i> Alexander E. Oberlander, April 9, '85.....	.....	Private, Forty-first Separate Company, March 13, 1883; Second Lieutenant, April 9, 1885.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Harry C. Baum, Jan. 12, 1887.....	.....	First Lieutenant and Assistant Surgeon, Forty-first Separate Company, Jan. 12, 1887.	N. Y.

FORTY-SECOND SEPARATE COMPANY.

Fourth Brigade.

Armory, Niagara Falls, Niagara County.

<i>Captain.</i> Charles B. Gaskill, Nov. 9, 1885.....	Private, 44th N. Y. vols., Oct., 1861; Second Lieutenant, Dec. 23, 1861; First Lieutenant, May 14, 1862; resigned, Dec. 18, 1862; Captain, 78th U. S. C. T., 1863; Major, 81st U. S. C. T., April 1, 1864; Lieuten- ant-Colonel and Colonel; resigned, Dec. 31, 1865; Captain, 40th U. S. infantry, July 28, 1866; transferred to 25th U. S. infantry, April 20, 1869; resigned, Dec. 1, 1870; Brevet Lieutenant-Colonel, U. S. A.	Captain, Forty-second Separate Company, Nov. 9, 1885.	N. Y.
<i>First Lieutenant.</i> Lauren W. Pettebone, Nov. 9, 1885.....	.....	First Lieutenant, Forty-second Separate Company, Nov. 9, 1885.	N. Y.
<i>Second Lieutenant.</i> Mighells B. Butler, Nov. 9, 1885.....	.....	Second Lieutenant, Forty-second Separate Com- pany, Nov. 9, 1885.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> William R. Campbell, Dec. 24, 1887..	.....	First Lieutenant and Assistant Surgeon, Forty second Separate Company, Dec. 24, 1887.	N. Y.

FORTY-THIRD SEPARATE COMPANY.

Fourth Brigade.

Armory, Olean, Cattaraugus County.

<i>Captain.</i> Culver Gilman Thyng, March 17, 1887.	Captain, Forty-third Separate Company, March 17, 1887.	N. Y.
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INFANTRY — FORTY-THIRD SEPARATE COMPANY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>First Lieutenant.</i> Henry Fred. Lee, March 17, 1887.....	Drummer, N. G. Pa., 1876 and 1877; Private, Co. A, 16th Regt., N. G. Pa., April 24, 1878; discharged, June 24, 1882; First Lieutenant, Forty-third Separate Company, March 17, 1887.	N. Y.
<i>Second Lieutenant.</i> Russell M. Whitney, Sept. 3, 1888.....
<i>First Lieutenant—Assistant Surgeon.</i> Selden Johnson Mudge, April 12, 1887,	Assistant Surgeon, Forty-third Separate Company, April 12, 1887.	N. Y.
FORTY-FOURTH SEPARATE COMPANY.			
Third Brigade.			
<i>Armory, Ulica, Oneida County.</i>			
<i>Captain.</i> Lewis E. Goodier, March 27, 1888.....	Private, Forty-fourth Separate Company. Oct. 27, 1887; Captain, March 27, 1888.	N. Y.
<i>First Lieutenant.</i> John Cummings, Jr., Sept. 27, 1887.....	First Lieutenant, Forty-fourth Separate Company, Sept. 27, 1887.	Ont.
<i>Second Lieutenant.</i> Edmond A. O'Brien, Sept. 27, 1887.....	Second Lieutenant, Forty-fourth Separate Company, Sept. 27, 1887.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> James G. Hunt, May 8, 1888.....	First Lieutenant and Assistant Surgeon, May 8, 1888.	N. Y.

FORTY-FIFTH SEPARATE COMPANY.

Fourth Brigade.

Armory, Cortland, Cortland County; organized by S. O. No. 9, A. G. O., January 30, 1888.

Captain.

Burnett E. Miller, Jan. 24, 1888.....	Private, 46th Mass. vols., Sept., 1862, 9 months; 2d Lieutenant, 149th N. Y. vols., Oct. 14, 1863; First Lieutenant, Jan. 6, 1864; honorably discharged, Aug. 1865; Second Lieutenant, 8th U. S. Infantry, Feb. 23, 1866; First Lieutenant, July 28, 1866; unassigned, Dec. 10, 1869; discharged Dec. 24, 1870.	Captain, Forty-fifth Separate Company, Jan. 24, 1888.	N. Y.
<i>First Lieutenant.</i> David F. Dunsmore, Jan. 24, 1888.....	Private, Co. A, 2d N. Y. Vol. Artillery, Jan. 26, 1864; discharged March 14, 1865.	Private Troop E, fall of 1873; Quartermaster-Sergeant in fall of 1874; discharged by disbandment in 1879; First Lieutenant, Forty-fifth Separate Company, Jan. 24, 1888.	N. Y.
<i>Second Lieutenant.</i> Joseph R. Birdlebough, Jan. 24, 1888.....	Private, 76th N. Y. vols., Oct., 1861; discharged for disability, July 17, 1862; re-enlisted, Aug., 1864, in 39th N. Y. vols., transferred to 185th N. Y. vols., Dec. 1864; mustered out, May 30, 1865.	Second Lieutenant, Forty-fifth Separate Company, Jan. 24, 1888.	N. Y.
<i>Assistant Surgeon—First Lieutenant.</i> Francis W. Higgins, March 12, 1888.....			

FORTY-SIXTH SEPARATE COMPANY.

Third Brigade.

Armory, Amsterdam, Montgomery County; organized by S. O. No. 94, A. G. O., September 6, 1888.

Captain.

Darwin E. Vunk, Sept. 3, 1888.....	Private, 83d Regt., Aug. 4, 1870; First Sergeant in spring, 1872; discharged by disbandment, Jan. 17, 1874; Captain, Forty-sixth Separate Company, Sept. 3, 1888.		N. Y.
<i>First Lieutenant.</i>			

INFANTRY — FORTY-SIXTH SEPARATE COMPANY — (*Continued*).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Second Lieutenant.</i> Samuel Wasserman, Sept. 3, 1888.....

SUPERNUMERARY OFFICERS ASSIGNED TO ACTIVE DUTY.

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Colonel.</i> David M. Greene, Oct. 6, 1873.....	Third Assistant Engineer, U. S. N., May 21, 1861; Second Assistant Engineer, Oct. 29, 1862; First Assistant Engineer, April 11, 1865; resigned, Sept., 1869.	Colonel and Engineer, Third Division, Oct. 6, 1873; Supernumerary, Aug. 5, 1886; assigned to duty with 3d Brigade, as Engineer, Oct. 26, 1886.	N. Y.
<i>Lieutenant-Colonel.</i> Benjamin S. Church, Dec. 8, 1884.....	.....	Captain and Engineer, 12th Regt., N. Y. S. Militia, Nov. 26, 1860; Major and Inspector, 2d Brigade, Dec. 17, 1864; Major and Engineer, Oct. 29, 1867; discharged Feb. 1, 1868; Lieutenant-Colonel and Engineer, First Division, Dec. 8, 1884; Supernumerary, Aug. 5, 1886, and assigned to duty with First Brigade, as Engineer, Sept. 17, 1886.	N. Y.
<i>Majors.</i> Frederick B. Spriggs, April 23, 1883.....	.....	Captain and Aide-de-Camp, Aug. 31, 1878; Captain and Commissary of Subsistence, Aug. 24, 1880; Major and Commissary of Subsistence, April 23, 1883; Supernumerary, Aug. 5, 1886; assigned to duty with 3d Brigade, Oct. 15, 1886.	.....
Edward L. Gaul, April 24, 1883.....	Captain's clerk, U. S. Navy, April, 1861, to Feb., 1862; Captain, Co. A, 159th N. Y. vols., Sept. 11, 1862; Major, April 14, 1863; Lieutenant-Colonel, Jan. 10, 1864; discharged for disability, June 2, 1864.	Major and Aide-de-Camp, Third Division, April 24, 1883; Supernumerary, Aug. 5, 1886; assigned to duty with 3d Brigade, Oct. 15, 1886.	N. Y.

SUPERNUMERARY OFFICERS ASSIGNED TO ACTIVE DUTY — (Continued).

NAME, GRADE AND DATE OF RANK.	SERVICE.		Born.
	In the Armies of the United States.	In the National Guard.	
<i>Majors—(Continued).</i> Edmund C. Stanton, June 22, 1835...	First Lieutenant and Aide-de-Camp, 1st Brigade, May 19, 1880; resigned July 22, 1880; Captain and Assistant Signal Officer, 1st Brigade, Nov. 1, 1884; Major and Quartermaster, 1st Brigade, Jan. 22, 1885; Supernumerary, Aug. 5, 1886; assigned to duty with 1st Brigade, Dec. 6, 1886.	Conn.
Robert Lenox Banks, Jr., March 17, '86,	Major and Quartermaster, 5th Brigade, March 17, 1886; Supernumerary, Aug. 5, 1886; assigned to duty with 3d Brigade, Sept. 29, 1888, S. O., No. 100, A. G. O.	N. Y.
<i>Captains.</i> James M. Brady, Dec. 27, 1871.....	Captain, Co. C, 12th Regt., Dec. 27, 1871; Supernumerary, by disbandment, Jan. 12, 1876; assigned to duty with 12th Regt., Jan. 28, 1886.	.....
G. Henry Witthaus, March 1, 1879	Private, Co. B, 9th Regt., Nov. 1, 1877; Captain, I. R. P., March 1, 1879; rendered Supernumerary, June 4, 1886; assigned to duty with 9th Regt., Jan. 22, 1887; S. O., No. 4, § 5, A. G. O.	N. Y.
Frederick T. Leigh, May 8, 1886.....	Captain and Assistant Signal Officer, 2d Division, May 8, 1886; Supernumerary, Aug. 5, 1886; assigned to duty as Signal Officer, 2d Brigade, S. O., No. 86, A. G. O., Oct. 5, 1887.	.....

SUPERNUMERARY OFFICERS.

Supernumerary Officers failing to report in writing in the month of November, each year, to the Adjutant-General are dropped from the Register.

NAME, GRADE AND DATE OF RANK.	RETIRED OR RENDERED SUPERNUMERARY.		Residence.
	From which Organization.	When.	
<i>Major-Generals.</i>			
Farnsworth, J. G., January 1, 1883.....	Adjutant-General.....	December 31, 1885	Albany.
Husted, James W., March 26, 1873.....	Fifth Division.....	December 17, 1881	Peekskill.
Rogers, William Findlay, January 21, 1879.....	Fourth Division.....	August 5, 1886	Buffalo.
<i>Brigadier-Generals.</i>			
Beers, Edmund O., October 25, 1884.....	Seventh Brigade, Fourth Division.....	August 5, 1886	Elmira.
Briggs, Philip H., January 1, 1883.....	Inspector-General.....	December 31, 1885	Brooklyn.
Dering, Sylvester, May 12, 1863.....	Sixth Brigade, Third Division.....	August 5, 1886	Utica.
Sullivan, T., July 29, 1872.....	Sixth Brigade, Sixth Division.....	December 17, 1881	Oswego.
Ward, Rodney C., February 25, 1886.....	Fourth Brigade, Second Division.....	August 5, 1886	Brooklyn.
Ward, William Green, December 24, 1866.....	First Brigade, First Division.....	August 5, 1886	New York city.
<i>Colonels.</i>			
Bridge, Charles E., January 1, 1883.....	Assistant Quartermaster-General.....	December 29, 1885	New York city.
Burton, Matthew H., April 21, 1876.....	Surgeon, Third Division.....	August 5, 1886	Troy.
Chamberlain, Lee, November 5, 1869.....	Asst. Adjt.-General, Third Division.....	August 5, 1886	Troy.
Denslow, William Judd, November 24, 1884....	Inspector, Second Brigade.....	June 21, 1887	Brooklyn.
Depew, Chauncey M., July 7, 1873.....	Judge-Advocate, Fifth Division.....	December 17, 1881	Peekskill.
Gildersleeve, Henry A., October 5, 1874.....	Asst. Adjt.-General, First Division.....	August 5, 1886	New York city.
Houghton, Calvin V., August 16, 1880.....	Forty-eighth Regiment.....	December 17, 1881	Oswego.
Jussen, Carl, October 7, 1874.....	Inspector, First Division.....	August 5, 1886	New York city.
Lamont, Daniel S., January 1, 1883.....	Military Secretary.....	January 5, 1885	New York city.
Lindley, Alfred F., March 9, 1876.....	Twenty-first Regiment.....	December 17, 1881	Washington, D. C.
Mullin, Joseph, November 16, 1874.....	Inspector, Fourth Division.....	December 23, 1878	Poughkeepsie.
Reichert, Louis P., May 6, 1878.....	Seventy-fourth Regiment.....	August 9, 1883	Watertown.
Rice, William G., February 17, 1875.....	Assistant Paymaster-General.....	March 2, 1885	Albany.

SUPERNUMERARY OFFICERS, N. G., S. N. Y.—(Continued).

NAME, GRADE AND DATE OF RANK.	RETIRED OR RENDERED SUPERNUMERARY.		Residence.
	From which Organization.	When.	
<i>Colonels—(Continued).</i>			
Rockwood, Ebenezer Arthur, April 22, 1881.....	Asst. Adjt.-General, Fourth Division.....	August 19, 1884	Buffalo.
Rounds, Edward H., July 7, 1885.....	Asst. Adjt.-General, Fourth Division.....	August 5, 1886	Buffalo.
Van Brackle, C. H., January 10, 1877.....	Asst. Adjt.-General, Fourth Division.....	July 25, 1878	Watertown.
Van Wyck, William E., August 5, 1875.....	Asst. Adjt.-Gen., 2d Brig., Sup'y Officer..	September 6, 1880	New York city.
Vose, Richard, September 11, 1872.....	Seventy-first Regiment.....	December 19, 1884	New York city.
Ward, John J., January 4, 1867.....	Twelfth Regiment.....	October 16, 1877	New York city.
<i>Lieutenant-Colonels.</i>			
Alden, Henry M., October 15, 1874.....	Ordnance Officer, Third Division.....	August 5, 1886	Troy.
Boughton, William De Lancey, June 23, 1882..	Ordnance Officer, First Division.....	August 5, 1886	New York city.
Burton, Wingfield G., January 12, 1880.....	Assistant in Ordnance Department.....	December 19, 1885	New York city.
Cooke, Edward A., November 27, 1872.....	Asst. Adjt.-Gen., 6th Brig., 6th Div.....	December 17, 1881	Oswego.
Cooley, Alfred, October 9, 1874.....	Sixteenth Battalion.....	December 17, 1881	Mt. Vernon.
Cowan, John F., November 24, 1884.....	Ordnance Officer, Second Division.....	August 5, 1886	Brooklyn.
Cropsey, Athelbert, August 16, 1880.....	Forty-eighth Regiment.....	December 17, 1881	Oswego.
David, Albert L., June 12, 1883.....	Assistant in Depart. Rifle Practice.....	December 12, 1887	New York city.
Edson, Cyrus, January 6, 1883.....	Surgeon, First Division.....	August 5, 1886	New York city.
Francis, Charles Spencer, May 1, 1884.....	Inspector, Third Division.....	August 5, 1886	Troy.
Gillis, George H., April 24, 1883.....	Chief of Artillery, Third Division.....	August 5, 1886	Saratoga Springs.
Hayt, Edward D. (Brev. Col.), August 27, 1878..	Seventeenth Battalion.....	December 17, 1881	Brooklyn.
Hick, William H., March 23, 1886.....	Inspector Rifle Practice, Fourth Division..	August 5, 1886	Arcade.
Keep, J. Lester (Brev. Col.), March 12, 1883....	Surgeon, Second Division.....	November 19, 1884	Brooklyn.
King, William H., August 5, 1875.....	Sixth Regiment.....	September 6, 1880	Albany.
Knapp, Louis H., June 3, 1882.....	Engineer, Fourth Division.....	August 5, 1886	Buffalo.
Krank, George, August 15, 1877.....	Twenty-fifth Regiment.....	February 12, 1881	Albany.
Lawrence, Abram B., January 2, 1883.....	Ordnance Officer, Fourth Division.....	August 5, 1886	Warsaw.
Lewis, George H., July 7, 1885.....	Com'sary of Subsistence, Fourth Div.....	August 5, 1886	Buffalo.
Masters, Hilbert B., December 8, 1884.....	Com'sary of Subsistence, First Div.....	August 5, 1886	New York city.

Mather, Andrew E., January 1, 1880.....	Asst. Adjt.-General, Fifth Brigade.....	July	14, 1883	Albany.
Middleton, Clifford L., April 19, 1886.....	Asst. Adjt.-General, Fourth Brigade.....	August	5, 1886	New York city.
Mitchell, Edward, September 24, 1881.....	Judge-Advocate, First Division.....	August	5, 1886	New York city.
Olyphant, Rob. (Brev. Brig-Gen.), Dec. 18, 1880.	Asst. Adjt.-General, First Brigade.....	August	5, 1886	New York city.
Overton, William B., May 26, 1880.....	Com'sary of Subsistence, Second Div.....	November	22, 1884	New York city.
Palmer, Charles N., October 27, 1879.....	Surgeon, Fourth Division.....	August	5, 1886	Lockport.
Phillips, Lewis F., April 28, 1877.....	Inspector of Rifle Practice, Fourth Div.....	July	25, 1878	Watertown.
Robb, J. Hampden, May 7, 1883.....	Asst. Adjt.-General, Second Brigade.....	August	5, 1886	New York city.
Robson, Benjamin R., March 23, 1870.....	Asst. Adjt.-General, Sixth Brigade.....	August	5, 1886	Utica.
Roullier, Gustave A., November 24, 1884.....	Inspector of Rifle Practice, Second Div.....	August	5, 1886	Brooklyn.
Sanford, E. Harrison, February 20, 1877.....	Inspector of Rifle Practice, First Div.....	August	5, 1886	New York city.
Schoeffel, Francis A., April 20, 1877.....	Asst. Adjt.-General, 12th Brig., 7th Div.....	November	24, 1880	Rochester.
Sourwine, Daniel, September 22, 1885.....	Chief of Artillery, Fourth Division.....	August	5, 1886	Buffalo.
Storcy, J. Henry, March 15, 1880.....	Inspector, Second Division.....	November	19, 1884	Brooklyn.
Van Keuren, John A., February 11, 1875.....	Asst. Adjt.-General, 8th Brig., 5th Div.....	December	17, 1881	Poughkeepsie.
Webber, Abraham L., December 10, 1879.....	Fifth Regiment.....	December	17, 1881	New York city.
Wood, Edward T., December 16, 1882.....	Quartermaster, First Division.....	August	5, 1886	New York city.
Wray, A. H., June 4, 1877.....	Ordnance Officer, Fourth Division.....	July	9, 1878	New York city.
<i>Majors.</i>				
Ackerman, Howard, December 8, 1884.....	Ordnance Officer, Third Brigade.....	August	5, 1886	New York city.
Aspinwall, Lloyd, Jr., October 25, 1883.....	Inspector of Rifle Practice, First Brigade.....	August	5, 1886	New York city.
Baton, James, December 6, 1884.....	Inspector of Rifle Prac., Seventh Brigade.....	August	5, 1886	Elmira.
Bishop, Edwin F., April 13, 1886.....	Aide-de-Camp, Fourth Division.....	August	5, 1886	Buffalo.
Brown, Herbert P., August 10, 1885.....	Commissary of Subsistence, First Brigade.....	August	5, 1886	New York city.
Burton, John E., May 21, 1880.....	Tenth Regiment.....	February	17, 1881	Kansas City, Mo.
Clarke, H. Wadsworth, October 28, 1879.....	Twenty-first Regiment.....	December	17, 1881	Syracuse.
Coburn, John W., March 10, 1876.....	Twenty-seventh Regiment.....	November	22, 1878	New York city.
Cowdin, John Elliott, February 6, 1884.....	Ordnance Officer, First Brigade.....	August	5, 1886	New York city.
De La Vergne, June 18, 1885.....	Surgeon, Thirteenth Regiment.....	February	15, 1888	Brooklyn.
Denton, Julius S., December 6, 1884.....	Ordnance Officer, Seventh Brigade.....	August	5, 1886	Elmira.
Earle, Eugene M., May 6, 1875.....	Engineer, Second Brigade.....	September	6, 1880	New York city.
Eaton, J. Emory, April 23, 1883.....	Quartermaster, Sixth Brigade.....	August	5, 1886	Utica.
Elsworth, Edward, March 24, 1875.....	Judge-Advocate, Eighth Brigade.....	December	17, 1881	Poughkeepsie.
Everett, Charles J., January 14, 1878.....	Judge-Advocate, Sixth Brigade.....	August	5, 1886	Utica.
Gedney, Frederick G., January 17, 1881.....	Fifth Regiment.....	December	17, 1881	New York city.
Goodrich, William W., January 2, 1883.....	Judge-Advocate, Fourth Brigade.....	August	5, 1886	New York city.

SUPERNUMERARY OFFICERS, N. G., S. N. Y.—(Continued).

NAME, GRADE AND DATE OF RANK.	RETIRED OR RENDERED SUPERNUMERARY.		Residence.
	From which Organization.	When.	
<i>Majors—(Continued).</i>			
Handy, Isaac F. (Brev. Lieut.-Colonel), June 17, 1871.....	Aide-de-Camp, Third Division.....	July 11, 1881	Troy.
Herbert, George R., December 15, 1884.....	Aide-de-Camp, Second Division	August 5, 1886	Brooklyn.
Herbert Robert, March 15, 1880.....	Aide-de-Camp, Second Division.....	August 5, 1886	Brooklyn.
Howard, Henry W. B., November 22, 1884.....	Aide-de-Camp, Second Division.....	August 5, 1886	New York city.
Ives, Hugh M., November 3, 1876.....	Surgeon, Sixteenth Battalion.....	December 17, 1881	Hastings on Hud.
Johnson, Richard M., December 8, 1884.....	Inspector, Third Brigade.....	August 5, 1886	New York city.
Koch, Joseph, October 27, 1879.....	Judge-Advocate, Second Brigade	September 6, 1880	New York city.
Luckey, R. Livingston (Brev. Lieut.-Col.), September 8, 1875.....	Inspector, Seventh Brigade.....	December 17, 1881	New York city.
McArthur, Arthur, July 11, 1881.....	Aide-de-Camp, Third Division.....	August 5, 1886	Troy.
Morgan, Wm. Fellows, June 22, 1885.....	Engineer, First Brigade.....	August 5, 1886	New York city.
Morse, G. Livingstone, July 5, 1879.....	Insp. of Rifle Practice, Seventh Brigade..	December 17, 1881	Yonkers.
Murray, Francis Wisner, February 11, 1885.....	Surgeon, First Brigade.....	August 5, 1886	New York city.
Perrine, Howland D., May 8, 1886.....	Chief Signal Officer, Second Division..	August 5, 1886	New York city.
Poillon, Richard H., September 17, 1879.....	Engineer, Fourth Brigade.....	August 5, 1886	New York city.
Pomeroy, Dexter E., March 23, 1880.....	Insp. of Rifle Practice, Sixth Brigade.....	August 5, 1886	Utica.
Powell, Seneca D., March 10, 1875.....	Surgeon, Second Brigade.....	September 6, 1880	New York city.
Randall, Walter F., May 1, 1885.....	Engineer, Sixth Brigade.....	August 5, 1886	Oneida.
Rockwell, Hosea H., December 6, 1884.....	Judge-Advocate, Seventh Brigade.....	August 5, 1886	Elmira.
Scott, David, March 3, 1877.....	Inspector, Second Brigade.....	September 6, 1880	New York city.
Sherrill, Lewis T., October 8, 1883.....	Inspector, Sixth Brigade.....	August 5, 1886	Utica.
Spahn, Jacob, April 20, 1877.....	Engineer, Twelfth Brigade	April 2, 1880	Rochester.
Stearns, Edson J., December 6, 1884.....	Com'sary of Subsistence, Seventh Brigade.	August 5, 1886	Syracuse.
Terry, Marshall O., March 15, 1880.....	Surgeon, Sixth Brigade	August 5, 1886	Utica.
Theall, John H., December 7, 1875.....	Fiftieth Battalion	November 22, 1878	Enfield Centre.
Vought, W. G., July 7, 1885.....	Com'sary of Subsistence, Eighth Brigade.	August 5, 1886	Buffalo.
Ward, Samuel B., July 11, 1878.....	Surgeon, Fifth Brigade	August 5, 1886	Albany.

Webb, Francis Egerton, November, 14, 1885.	Inspector, First Brigade.	August	5, 1886	New York city.
Woodward, James O., May 13, 1885.	Ordnance Officer, Fifth Brigade.	August	5, 1886	Albany.
<i>Captains.</i>				
Ackerman, Cornelius W., September 3, 1875.	I. R. P., 84th Regt.	December	18, 1875	New York city.
Adrian, I. Reynolds, February 11, 1875.	Aide-de-Camp, Eighth Brig., 5th Division.	December	17, 1881	Poughkeepsie
Allen, Flavius J., October 10, 1877.	Aide-de-Camp, Second Brig., 1st Division.	November	24, 1880	New York city
Anhalt, Abraham, July 21, 1881.	Fifth Regiment.	December	17, 1881	New York city.
Baker, Guy E., September 1, 1885.	Aide-de-Camp, Fifth Brigade.	August	5, 1886	Albany.
Bissell, Henry F., February 25, 1878.	Battery "D"	December	17, 1881	Poughkeepsie.
Boshart, William F., June 7, 1875.	Twenty-first Regiment.	December	17, 1881	Poughkeepsie.
Callahan, John J., Jr., November 18, 1879.	Sixty-fifth Regiment.	January	24, 1883	Buffalo.
Cushing, William (Brevet Major), Oct. 29, 1869.	Sixty-ninth Regiment.	December	6, 1884	New York city.
Cushman, Harry C., January 31, 1883.	Aide-de-Camp, Fifth Brigade.	August	5, 1886	Albany.
D'Oremieux, Leon F., November 14, 1885.	Aide-de-Camp, First Brigade.	August	5, 1886	New York city.
Dorn, George W., November 7, 1879.	Troop "F"	December	28, 1880	Albany.
Gardner, Henry J., October 31, 1881.	Aide-de-Camp, Sixth Brig., 6th Div.	December	17, 1881	Oswego.
Grotz, W. F., March 27, 1878.	Thirty-second Regiment.	September	29, 1888	Brooklyn.
Hacker, Adam, April 1, 1880.	Twenty-fifth Regiment.	February	12, 1881	Albany.
Hall, Albert C., October 10, 1877.	Quartermaster, Second Brig., 1st Div.	September	6, 1880	New York city.
Hart, Charles L., December 6, 1884.	Aide-de-Camp, Seventh Brigade.	August	5, 1886	Elmira.
Haubennestel, Henry, July 5, 1877.	Twenty-first Regiment	December	17, 1881	Poughkeepsie.
Herbold, Julius T., May 28, 1881.	Sixty-fifth Regiment	October	20, 1887	Buffalo.
Hornbeck, B. J., November 8, 1877.	Fourteenth Separate Company.	December	28, 1887	Kingston.
Hornbostel, Andrew, March 2, 1881.	Fifth Regiment.	December	17, 1881	New York city.
Jones, Abram, March 18, 1874.	Sixteenth Battalion	December	17, 1881	Sing Sing.
Knapp, Henry J., June 4, 1878.	Fifty-first Regiment.	December	17, 1881	Fayetteville.
Lambart, Frederick, October 2, 1871.	Twenty-seventh Regiment.	November	22, 1878	New York city.
L'Hommedieu, R. W., January 20, 1866.	Sixteenth Regiment.	June	5, 1868	Brooklyn.
McAndrews, John H., June 25, 1879.	Seventy-fourth Regiment.	December	17, 1881	Buffalo.
Maynard, Newland, May 24, 1886.	Chaplain, 47th Regiment	February	29, 1888	New York city.
Menker, Henry A., September 18, 1876.	Inspector of Rifle Practice, 65th Regt.	November	1, 1887	Buffalo.
Milbank, William E., July 13, 1880.	Inspector of Rifle Practice, 10th Battalion.	October	13, 1883	Albany.
Morgan, George, Jr., December 13, 1870.	Seventy-fourth Regiment.	December	17, 1881	Buffalo.
Munson, David W., December 6, 1884.	Aide-de-Camp, Seventh Brigade.	August	5, 1886	Elmira.
Porter, Joseph H., September 2, 1875.	Twenty-seventh Regiment.	November	22, 1878	New York city.
Raines, John, July 5, 1878.	Twenty-fifth Separate Company	December	6, 1888	Canandaigua.

SUPERNUMERARY OFFICERS, N. G., S. N. Y.—(Continued).

NAME, GRADE AND DATE OF RANK.	RETIRED OR RENDERED SUPERNUMERARY.		Residence.
	From which Organization.	When.	
<i>Captains—(Continued).</i>			
Romain, Frank H., April 20, 1885.....	Aide-de-Camp, Third Brigade.....	August 5, 1886	New York city.
Scott, George, September 25, 1884.....	Assistant Surgeon, 71st Regiment.....	March 27, 1885	New York city.
Sharp, James E., September 17, 1885.....	Fourth Battery.....	February 16, 1887	Troy.
Steele, Henry S., June 3, 1878.....	Seventh Regiment.....	November 16, 1888	New York city.
Stierly, Robert S., December 12, 1876.....	Battalion of Artillery.....	September 4, 1880	Rochester.
Tallman, John C. C., January 22, 1872.....	Ninth Regiment.....	February 29, 1884	New York city.
Trimble, Walter, October 25, 1883.....	Aide-de-Camp, First Brigade.....	August 5, 1886	New York city.
Watson, William L., April 23, 1883.....	Aide-de-Camp, Sixth Brigade.....	August 5, 1886	Utica.
Webb, William E., October 10, 1877.....	Ordinance Officer, 2d Brig., 1st Division..	September 6, 1880	New York city.
Williams, Alfred H. (Brevet Major), Dec. 6, 1873.	Twenty-third Regiment.....	February 25, 1885	Philadelphia, Pa.
Wood, Henry G., July 26, 1875.....	Third Separate Company.....	August 26, 1886	Peoria, Ills.
<i>First Lieutenants.</i>			
Britton, Reuben A. (Brev. Cap.), March 29, 1879.	Quartermaster, Ninth Regiment.....	December 7, 1885	New York city.
Burd, Eugene W., October 16, 1885.....	Adjutant, Twenty-third Regiment.....	January 25, 1888	Brooklyn.
Cavana, Martin, December 17, 1881.....	Thirty-fifth Separate Company.....	February 20, 1882	Oncida.
De Lacey, William L., April 5, 1878.....	Battery "D".....	December 17, 1881	Poughkeepsie.
Dunscomb, John H., December 1, 1877.....	Adjutant, Sixteenth Battalion.....	December 17, 1881	Sing Sing.
Ernst, Louis J., April 12, 1878.....	Quartermaster, Fifty-fourth Regiment...	December 10, 1880	Rochester.
Fichtner, David E., July 1, 1879.....	Battalion of Artillery.....	September 4, 1880	Rochester.
Girvin, Thomas, Jr., June 11, 1869.....	Seventy-first Regiment.....	July 17, 1875	New York city.
Johnston, James O., April 6, 1874.....	Adjutant, Eighth Regiment.....	May 22, 1888	New York city.
Loeper, C. O. H. (Brev. Cap.), Feb. 29, 1868.	Adjutant, Twenty-fifth Regiment.....	December 17, 1881	Albany.
Manning, James H., March 15, 1878.....	Commissary of Subsistence, Tenth Batt..	October 13, 1883	Albany.
Paddock, Chas. H., July 5, 1878.....	Twenty-fifth Separate Company.....	December 6, 1888	Canandaigua.
Ryder, William W., April 4, 1878.....	Sixteenth Battalion.....	December 17, 1881	Sing Sing.
Schermerhorn, Arthur F., February 11, 1884.	Adjutant, Twelfth Regiment.....	June 5, 1888	New York city.
Sexton, Samuel, September 17, 1885.....	Fourth Battery.....	February 16, 1887	Troy.

Smith, Peter J., December 12, 1876.....	Battery "I".....	September 4, 1880	Rochester.
Tillinghast, John M., June 26, 1884.....	Twenty-fourth Separate Company.....	March 2, 1887	Utica.
Topping, Charles W., Dec. 29, 1886.....	Quartermaster, Thirteenth Regiment....	February 15, 1888	Brooklyn.
Windholz, Louis, September 26, 1878..	Commissary of Substist., Fifty-first Regt..	December 17, 1881	Syracuse.
Wyckoff, Albert T., May 8, 1872.....	Seventh Regiment.....	February 18, 1884	Brooklyn.
Wyman, Isaac L., May 3, 1880.....	Commissary of Subsistence, Fifth Regt....	December 17, 1881	New York city.
<i>Second Lieutenants.</i>			
Fredenbergh, Jerome C., Dec. 17, 1884.....	Twenty-fifth Separate Company	December 6, 1888	Canandaigua.
Heidel, Joseph, March 21, 1878.....	Twenty-first Regiment	December 17, 1881	Poughkeepsie.
Jewett, Gilbert W., July 19, 1880.....	Fourth Battery.....	February 16, 1887	Troy.
Merritt, Graham B., July 29, 1879.....	Sixteenth Battalion.	December 17, 1881	Sing Sing.
O'Connor, Jeremiah, December 22, 1885.....	Twenty-fourth Separate Company.....	December 2, 1887	Utica.
Satterlee, Nelson R., December 17, 1879.....	Thirty-fifth Separate Company.....	February 20, 1882	Oneida.

Relative Rank of Officers in Active Service.

(GENERAL OFFICERS AND STAFF OF COMMANDER-IN-CHIEF EXCEPTED.)

Number.	NAME AND DATE OF RANK.	Organization.
<i>Colonels.</i>		
1	Emmons Clark, June 21, 1864.....	Seventh Regiment.
2	James Cavanaugh, Nov. 29, 1867.....	Sixty-ninth Regiment.
3	George D. Scott, October 18, 1869.....	Eighth Regiment.
4	David M. Greene, October 6, 1873.....	Engineer, Third Brigade.
5	David E. Austen, July 13, 1877.....	Thirteenth Regiment.
6	John S. McEwen, January 1, 1880.....	Assist. Adjutant-Gen. S. N. Y.
7	Frederick Phisterer, January 1, 1880....	Act. Asst. Adjt-Gen. S. N. Y.
8	Joseph G. Story, January 20, 1880.....	Assistant in Ordnance Dep't.
9	Louis Finkelmeier, Oct. 8, 1881.....	Thirty-second Regiment.
10	William Seward, Jr., April 17, 1882.....	Ninth Regiment.
11	John Bodine, January 1, 1883.....	Assist. Gen. Insp. Rifle Prac.
12	William M. Bloomer, April 10, 1883.....	Seventy-fourth Regiment.
13	Pascal P. Beals, January 8, 1884....	Assist. in Dep't Rifle Prac.
14	Thomas H. McGrath, February 7, 1884..	Assistant Inspector-General.
15	Edward F. Gaylor, July 2, 1884.....	Forty-seventh Regiment.
16	Edward B. Ten Broeck, March 21, 1885.	Assist. Paymaster-General.
17	Albert P. Stewart, June 1, 1885.....	Eleventh Regiment.
18	Harry W. Michell, Nov. 30, 1885....	Fourteenth Regiment.
19	John T. Camp, January 18, 1886....	Twenty-second Regiment.
20	Henry F. Clark, January 26, 1886.....	Asst. Quartermaster Gen'l.
21	Frank S. Collins, March 29, 1886.....	Asst. Chief of Ordnance.
22	Frederick Kopper, July 19, 1887.....	Seventy-first Regiment.
23	Samuel M. Welch, August 10, 1887.....	Sixty-fifth Regiment.
24	John N. Partridge, October 17, 1887....	Twenty-third Regiment.
25	William F. Duncan, August 23, 1888....	Assistant Surgeon-General.
<i>Lieutenant-Colonels.</i>		
1	Francis A. Shilling, Dec. 14, 1870.....	Eighth Regiment.
2	George Moore Smith, March 5, 1881....	Seventh Regiment.
3	John B. Frothingham, April 11, 1881....	Asst. Adjt-Gen., Second Brig.
4	Usual S. Johnson, May 14, 1883.....	Seventy-fourth Regiment.
5	William E. Fitch, August 22, 1883.....	Tenth Battalion.
6	Thomas B. Rand, February 5, 1884....	Ninth Regiment.
7	Charles Clifton, April 22, 1884.....	Assist. Adj-Gen., Fourth Brig.
8	Frederick S. Benson, November 19, 1884.	Forty-seventh Regiment.
9	Benjamin S. Church, December 8, 1884.	Engineer, First Brigade.
10	Heman Dowd, April 29, 1885.....	Twelfth Regiment.
11	William C. Walton, Sept. 9, 1885.....	Eleventh Regiment.
12	Selden C. Clobridge, November 30, 1885.	Fourteenth Regiment.
13	William J. Harding, February 8, 1886....	Thirteenth Regiment.
14	John E. Robie, Sept. 15, 1887.....	Sixty-fifth Regiment.
15	James A. Dennison, Sept. 15, 1887.....	Seventy-first Regiment.
16	Robert W. Leonard, October 6, 1887....	Asst. Adjt-Gen., First Brig.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Lieutenant-Colonels—(Continued).</i>		
17	Alexis C. Smith, December 5, 1887.....	Twenty-third Regiment.
18	Henry C. Clark, February 24, 1888.....	Thirty-second Regiment.
19	James Moran, March 12, 1888.....	Sixty-ninth Regiment.
20	George A. Miller, July 30, 1888.....	Twenty-third Regiment.
<i>Majors.</i>		
1	Gregory Doyle, June 1, 1872.....	Sur., Fifth Bat. of Artillery.
2	Edward Duffy, March 16, 1876.....	Sixty-ninth Regiment.
3	Lewis Balch, July 23, 1877.....	Surgeon, Tenth Battalion.
4	Stephen H. Olin, April 24, 1882.....	Judge Advocate, First Brig.
5	Charles L. Perkins, Jr., May 22, 1882...	Com. of Subsist., First Brig.
6	Albert Hoysradt, January 31, 1883.....	Judge Advocate, Third Brig.
7	Robert V. McKim, March 5, 1883.....	Surgeon, First Brigade.
8	Charles G. Stockton, April 23, 1883....	Sur'g, Seventy-fourth Regt.
9	Frederick B. Spriggs, April 23, 1883....	On duty with Third Brigade.
10	Gustave A. Jahn, April 23, 1883.....	Inspector, Second Brigade.
11	Albert H. Briggs, April 23, 1883.....	Surgeon, Sixty-fifth Regt.
12	Edward H. Ashwin, April 23, 1883.....	Surgeon, Forty-seventh Reg.
13	John F. Valentine, April 23, 1883.....	Surgeon, Thirty-second Reg.
14	Daniel M. Stimson, April 23, 1883.....	Surgeon, Seventh Regiment.
15	Charles E. Bruce, April 23, 1883.....	Surgeon, Eighth Regt.
16	Edward L. Gaul, April 24, 1883.....	On duty with Third Brigade.
17	Paul Dana, May 7, 1883.....	Ordnance Officer, First Brig.
18	Wolfgang Goetz, November, 19, 1883....	Surgeon, Eleventh Regt.
19	John J. Riker, January 9, 1884.....	Twelfth Regiment.
20	Edward S. Warren, April 22, 1884.....	Quartermaster, Fourth Brig.
21	Edmund Hayes, April 22, 1884.....	Engineer, Fourth Brigade.
22	Roswell Park, May 6, 1884.....	Surgeon, Fourth Brigade.
23	Auguste P. Montant, May 14, 1884.....	Quartermaster, First Brig.
24	Alan H. G. Hardwicke, June 3, 1884....	I. R. P., Fourth Brig.
25	John G. Eddy, November 19, 1884.....	Forty-seventh Regiment.
26	George L. Fox, January 19, 1885.....	I. R. P., Second Brigade.
27	Nelson H. Henry, January 23, 1885.....	Surgeon, Twelfth Regiment.
28	Wendell Goodwin, February 28, 1885....	Quartermaster, First Brig.
29	Edward T. T. Marsh, March 4, 1885....	Surgeon, Seventy-first Regt.
30	Edmund C. Stanton, June 22, 1885.....	Sup. Officer on duty, 1st Brig.
31	Frank A. Jones, August 21, 1885.....	Eleventh Regiment.
32	Herbert P. Bissell, August 25, 1885.....	Judge Ad., Fourth Brigade.
33	John McNeill, November 30, 1885.....	Fourteenth Regiment.
34	Wm. Cary Sanger, Jan. 4, 1886.....	Quartermaster, Second Brig.
35	Frank Lyman, January 4, 1886.....	Engineer, Second Brigade.
36	George A. Davis, January 4, 1886.....	Seventy-fourth Regiment.
37	Norton Chase, February, 18, 1886.....	Tenth Battalion.
38	Robert Lenox Banks, March 17, 1886...	Sup. on duty with third Brig.
39	Charles E. Waters, April 19, 1886.....	Twenty-third Regiment.
40	William H. Kipp, May 10, 1886.....	Seventh Regiment.
41	George Kinkel, Jr., May 17, 1886.....	Ord. Officer, Second Brigade.
42	George R. Fowler, June 2, 1886.....	Surgeon, Second Brigade.
43	Henry Chauncey, Jr., Sept. 6, 1886....	Eighth Regiment.
44	Edward O. Roessle, September 8, 1886..	Com. of Subsist., Third Brig.
45	Herman Bendell, September 8, 1886....	Surgeon, Third Brigade.
46	Patrick F. Bulger, September 8, 1886...	Ord. Officer, Third Brigade.
47	Charles H. Gaus, September 10, 1886....	I. R. P., Third Brigade.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Majors—(Continued).</i>		
48	Almet F. Jenks, October 4, 1886.....	Judge Adv., Second Brigade.
49	J. Freeman Atwood, January 3, 1887....	Surgeon, Fourteenth Regt.
50	Frederick A. Jewett, March 15, 1887....	Ord. Officer, Fourth Brigade.
51	Wallace A. Downs, April 19, 1887.....	Seventy-first Regiment.
52	Nathaniel Rochester, April 26, 1887....	Inspector, Fourth Brigade.
53	Fritz Brosé, July 5, 1886.....	Com. of Sub., Second Brig.
54	Edson J. Weeks, October 18, 1887.....	Com. of Sub., Fourth Brig.
55	William T. Parsons, October 27, 1887...	Sixty-fifth Regiment.
56	William E. Spencer, November 28, 1887.	Surgeon, Twenty-third Regt.
57	Edward Verdeckberg, Jan. 6, 1888.....	Thirty-Second Regiment.
58	Alvah H. Doty, March 8, 1888.....	First Surgeon, Ninth Regt.
59	Richard P. Morle, April 10, 1888.....	Thirteenth Regiment.
60	David Crocker, April 18, 1888.....	I. R. P., First Brigade.
61	John A. Cochran, May 24, 1888.....	Surgeon, Thirteenth Regt.
62	William R. Pryor, October 29, 1888....	Surgeon, Twenty-second Regt.
63	William V. King, November 19, 1888....	Twenty-second Regiment.
64	Hobart Warren Thompson, Dec. 20, 1888.	Quartermaster, Third Brigade.
<i>Captains.</i>		
1	Michael Bennan, May 10, 1865.....	Sixty-ninth Regiment.
2	Henry B. Henderson, July 12, 1865....	Eighth Separate Company.
3	Ramon Cardona, July 17, 1865.....	I. R. P., Fourteenth Regt.
4	William C. Clark, November 14, 1865...	Seventy-first Regiment.
5	D. Alonzo Pollard, April 5, 1866.....	Seventh Regiment.
6	William Haubennestel, Nov. 12, 1866...	Nineteenth Separate Co.
7	John Kerr, January 29, 1869.....	Sixty-ninth Regiment.
8	Alfred A. Doughty, May 25, 1869.....	Forty-seventh Regiment.
9	Michael Auer, April 6, 1870.....	Fifth Battery.
10	James M. Brady, December 27, 1871...	Supernum'ary, with 12th Regt.
11	Benjamin S. Steen, November 22, 1872..	Fourteenth Regiment.
12	Charles S. Burns, December 6, 1872....	Twelfth Regiment.
13	Joseph H. Remmer, June 3, 1873.....	Twenty-eighth Separate Co.
14	Laurel L. Olmstead, November 13, 1874.	Sixth Battery.
15	Hugh Coleman, January 4, 1875.....	Sixty-ninth Regiment.
16	Edward Barker, May 3, 1875.....	Insp. of Rifle Prac., 8th Regt.
17	Solomon E. Japha, July 12, 1875.....	Ninth Regiment.
18	James C. Abrams, September 29, 1875..	Seventh Regiment.
19	Alvah G. Brown, January 16, 1876.....	Insp. Rifle Prac., 47th Regt.
20	Charles Waage, March 29, 1876.....	Thirty-second Regiment.
21	Joseph Egoft, May 18, 1876.....	Twelfth Separate Company.
22	James W. Cusack, February 3, 1877....	Sixth Separate Company.
23	Hugh H. Heron, March 1, 1877.....	Twenty-ninth Separate Co.
24	Stephen P. Ryan, August 9, 1877.....	Sixty-ninth Regiment.
25	Horatio P. Stacpole, December 19, 1877.	Tenth Battalion.
26	William L. Watson, July 8, 1878.....	Thirteenth Regiment.
27	William R. Pettigrew, Sept. 11, 1878...	Forty-seventh Regiment.
28	Daniel Appleton, January 13, 1879.....	Seventh Regiment.
29	G. Henry Witthaus, March 1, 1879.....	Supernum'ary, with 9th Regt.
30	Matthew W. Marvin, May 20, 1879.....	Thirty-third Separate Co.
31	Berthold Myers, September 11, 1879....	Fifteenth Separate Co.
32	James S. Garrett, February 2, 1880.....	Eighteenth Separate Co.
33	Thomas Miller, Jr., February 25, 1880..	Seventeenth Separate Co.
34	Joseph R. K. Barlow, March 22, 1880.	Fourteenth Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Captains—(Continued).</i>		
35	Austin A. Yates, June 12, 1880.....	Thirty-sixth Separate Co.
36	George B. Rhoads, October 25, 1880....	Seventh Regiment.
37	Henry C. Aspinwall, November 24, 1880.	Twelfth Regiment.
38	James G. Cunningham, Dec. 6, 1880....	Sixty-ninth Regiment.
39	James T. Chase, March 17, 1881.....	Fifth Separate Company.
40	W. Maurice Kirby, May 11, 1881.....	Second Separate Company.
41	William J. Collins, August 12, 1881.....	Thirteenth Regiment.
42	Charles Lee Abel, October 3, 1881.....	Seventy-fourth Regiment.
43	Frank J. LeCount, Jr., Nov. 25, 1881....	Forty-seventh Regiment.
44	James Conlon, December 27, 1881.....	Sixty-ninth Regiment.
45	Augustus W. Conover, March 31, 1882..	Seventh Regiment.
46	George C. Fox, May 9, 1882.....	Seventy-fourth Regiment.
47	Henry S. Rasquin, May 22, 1882.....	Third Battery.
48	William H. Kirby, Jr., June 20, 1882....	Twelfth Regiment.
49	Angelo C. Lewis, July 3, 1882.....	Sixty-fifth Regiment.
50	Peter Paulus, November 27, 1882.....	Seventy-fourth Regiment.
51	Louis Wendel, December 15, 1882.....	First Battery.
52	George T. Lorigan, January 11, 1883....	Ninth Regiment.
53	Ezra De Forrest, January 29, 1883.....	Twenty-third Regiment.
54	Arthur M. Murphy, February 24, 1883...	Sixteenth Separate Co.
55	Washington Content, March 27, 1883....	Twelfth Regiment.
56	William Franklin, April 23, 1883.....	Insp. Rifle Prac., 74th Regt.
57	W. Emlen Roosevelt, April 23, 1883....	Aide-de-Camp, First Brigade.
58	William H. Palmer, May 1, 1883.....	Insp. Rifle Prac., 7th Regt.
59	Edgar V. Dennison, May 10, 1883.....	Tenth Battalion.
60	Robert C. McEwen, May 28, 1883.....	Twenty-second Separate Co.
61	George H. Howard, September 17, 1883.	Sixty-fifth Regiment.
62	Willard L. Candee, October 17, 1883....	Twenty-third Regiment.
63	Dennis C. McCarthy, Nov. 1, 1883.....	Sixty-ninth Regiment.
64	Otto F. Langenbach, November 13, 1883.	Sixty fifth Regiment.
65	William H. Murphy, December 20, 1883.	Twelfth Regiment.
66	John J. Dixon, January 10, 1884.....	Fourteenth Regiment.
67	William H. Eddy, February 4, 1884.....	Forty-seventh Regiment.
68	George E. B. Hart, March 28, 1884.....	Twenty-second Regiment.
69	William F. Morris, April 24, 1884.....	Fourteenth Regiment.
70	Parker G. Tymerson, May 7, 1884.....	Seventh Separate Company.
71	Andrew I. Budlong, May 20, 1884.....	Thirty-first Separate Co.
72	George W. York, May 21, 1884.....	As. Sur., Seventy-fourth Regt.
73	Samuel Hemingway, May 21, 1884.....	Asst. Surgeon, Eighth Regt.
74	Harry M. Sims, May 21, 1884.....	As. Sur., Twenty-second Regt.
75	Hiram C. Rogers, May 27, 1884.....	Twentieth Separate Co.
76	James L. Hyatt, June 2, 1884.....	Tenth Battalion.
77	James M. White, June 3, 1884.....	Fourteenth Regiment.
78	Noah L. Cocheu, June 23, 1884.....	Ninth Regiment.
79	Bleecker S. Barnard, August 1, 1884....	Twelfth Regiment.
80	Albert J. Dance, August 4, 1884.....	Seventy-fourth Regiment.
81	William Wilson, October 6, 1884.....	Thirty-fourth Separate Co.
82	Charles O. Davis, October 21, 1884.....	Thirteenth Regiment.
83	George C. Jeffery, October 29, 1884.....	As. Sur., Forty-seventh Regt.
84	George F. Demarest, Nov. 3, 1884.....	Twenty-second Regiment.
85	Louis E. Lefferts, December 3, 1884....	Seventh Regiment.
86	George H. Bishop, December 23, 1884...	Thirty-second Regiment.
87	Charles Lutellus Lindley, Jan. 23, 1885..	Asst. Surgeon, Twelfth Regt.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(*Continued*).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Captains—(Continued).</i>		
88	Roscius Morse, February 5, 1885.....	Thirtieth Separate Company.
89	John P. Leo, February 18, 1885... ..	Twenty-second Regiment.
90	Charles W. Eddy, March 20, 1885.....	Thirty-second Separate Co.
91	Thomas Mortimer, March 23, 1885.....	Sixty-ninth Regiment.
92	Andrew A. Oates, April 13, 1885.....	Eighth Regiment.
93	Maurice Cox, April 27, 1885.....	Sixty-ninth Regiment.
94	Wright D. Goss, April 30, 1885... ..	Seventy-first Regiment.
95	E. Austin Oothout, May 5, 1885.....	Eighth Regiment.
96	Theodore F. Schmidt, May 21, 1885.....	Eleventh Regiment.
97	William Kerby, May 22, 1885.....	Thirteenth Regiment.
98	Frederick L. Holmes, June 3, 1885.....	Twenty-third Regiment.
99	George William Collins, June 30, 1885...	Asst. Surgeon, Eleventh Regt.
100	Abraham Gridley, July 3, 1885.....	First Separate Company.
101	Howland Pell, August 25, 1885.....	Twelfth Regiment.
102	Alfred P. Delcambre, October 6, 1885....	Seventy-first Regiment.
103	Charles F. Surbrug, Oct. 12, 1885.....	Seventy-first Regiment.
104	John F. Bovlan, Oct. 26, 1885.....	Twelfth Regiment.
105	Henry W. Leonard, Nov. 4, 1885.....	Ninth Regiment.
106	Charles B. Gaskill, Nov. 9, 1885.....	Forty-second Separate Co.
107	John H. Swanson, Nov. 9, 1885.....	Sixty-fifth Regiment.
108	W. Wolcott Marks, Nov. 10, 1885.....	Ninth Regiment.
109	Isaac N. Pressey, Dec. 21, 1885.....	Eleventh Separate Company.
110	William H. Dewar, Feb. 3, 1886.....	Eighth Regiment.
111	Francis Root Keating, Feb. 9, 1886.....	Aide-de-Camp, Fourth Brig.
112	John Cutts, Feb. 19, 1886.....	Fourteenth Regiment.
113	Frank J. Stearns, March 11, 1886.....	Thirty-eighth Separate Co.
114	Thomas M. Young, March 15, 1886.....	Eighth Regiment.
115	Augustus T. Francis, March 19, 1886....	Seventy-first Regiment.
116	Willoughby Powell, March 19, 1886....	Thirteenth Regiment.
117	Albert J. Wing, March 22, 1886.....	Tenth Battalion.
118	Britton C. Thorn, March 30, 1886.....	Twenty-third Regiment.
119	William E. Preece, April 2, 1886.....	Twenty-second Regiment.
120	Frank N. Farrar, April 8, 1886.....	Seventy-fourth Regiment.
121	Charles M. Kennedy, April 13, 1886.....	Seventy-first Regiment.
122	Fred G. Winter, May 7, 1886.....	Asst. Sur., Thirty-second Reg.
123	Fred T. Leigh, May 8, 1886.....	Sup., on duty with Sec. Brig.
124	Joseph Worster Hale, May 18, 1886.....	In. Rifle Prac., Eleventh Reg.
125	Francis D. Beard, May 24, 1886.....	Aide-de-Camp, Second Brig.
126	Frank L. R. Tetamore, June 2, 1886....	Fourteenth Regiment.
127	Francis R. Appleton, Aug. 30, 1886.....	Aide-de-Camp, First Brig.
128	Darwin R. Aldrich, Sept. 2, 1886.....	Twenty-third Regiment.
129	Kasson C. Gibson, Sept. 6, 1886.....	Ins. Rifle Prac., Ninth Regt.
130	Charles J. Peabody, Sept. 8, 1886.....	Aide-de-Camp, Third Brig.
131	Walter Scott, Sept. 28, 1886.....	Third Separate Company.
132	Patrick J. Morgan, Oct. 26, 1886.....	Sixty-ninth Regiment.
133	John J. Klein, Oct. 29, 1886.....	Thirty-second Regiment.
134	Alexander T. Mason, Nov. 11, 1886....	Eighth Regiment.
135	Nathaniel B. Thurston, Dec. 20, 1886....	Twenty-second Regiment.
136	John Macaulay, Dec. 31, 1886.....	Ins. Rifle Practice, Twelfth Reg.
137	James Thorne Harper, Jan. 13, 1887....	Seventh Regiment.
138	Abel W. Belknap, Jan. 21, 1887.....	Seventy-first Regiment.
139	J. Frank Dillont, Feb. 4, 1887.....	Thirteenth Regiment.
140	Henry Holland, Feb. 8, 1887.....	Thirty-fifth Separate Co.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Captains—(Continued).</i>		
141	Haughwout Howe, March 5, 1887.....	Eighth Regiment.
142	Charles R. Wilson, March 15, 1887	Aide-de-Camp, Fourth Brig.
143	Charles B. Wood, March 17, 1887.....	Twenty-fourth Separate Co.
144	Culver Gilman Thyng, March 17, 1887...	Forty-third Separate Co.
145	George J. Haffa, March 22, 1887.....	Sixty-fifth Regiment.
146	John A. H. Dressel, March 30, 1887.....	Seventy-first Regiment.
147	Hewlings H. Quick, April 12, 1887.....	Forty-seventh Regiment.
148	George W. Mooney, April 14, 1887.....	Eleventh Regiment.
149	Van D. Macumber, April 25, 1887.....	I. R. P., Thirty-second Regt.
150	John J. Ryan, May 2, 1887.....	I. R. P., Sixty-ninth Regt.
151	John B. Christoffel, Jr., May 6, 1887.....	Forty-seventh Regiment.
152	Charles F. Guyon, May 12, 1887.....	Twenty-third Regiment.
153	Joseph P. Jardine, May 25, 1887.....	Asst., in Subsistence Dept.
154	Henry Smith, May 31, 1887.....	Thirteenth Sep. Company.
155	William A. Valentine, June 1, 1887.....	Asst. Surgeon, Seventh Regt.
156	William H. A. Cochran, July 6, 1887.....	Thirteenth Regiment.
157	Charles H. Hoyt, Aug. 1, 1887.....	I. R. P., Seventy-first Regt.
158	Edward J. Renison, Aug. 9, 1887.....	Thirty-second Regiment.
159	Rufus Delafield, Aug. 10, 1887.....	Twelfth Regiment.
160	Austin O. Crane, Aug. 15, 1887.....	Fourteenth Regiment.
161	Edward Bennett, Sept. 22, 1887.....	Fourteenth Regiment.
162	Allison K. Hume, Oct. 10, 1887.....	Sixty-fifth Regiment.
163	Hassell Nutt, Oct. 10, 1887.....	Fourteenth Regiment.
164	Floyd S. Crego, Oct. 25, 1887.....	Sixty-fifth Regiment.
165	George J. Metzger, Nov. 1, 1887.....	I. R. P., Sixty-fifth Regt.
166	W. De L. Cunningham, Nov. 16, 1887...	Eighth Regiment.
167	Charles E. P. Babcock, Nov. 21, 1887...	Sixty-fifth Regiment.
168	Washington Wilcocks, Nov. 22, 1887....	Ninth Regiment.
169	Joseph N. Billings, Nov. 23, 1887.....	Ninth Regiment.
170	John I. Pruyn, Nov. 26, 1887.....	Fourth Separate Company.
171	Henry L. Cochran, Nov. 28, 1887.....	Asst. Sur., Twenty-third Regt.
172	Robert P. Bush, Dec. 1, 1887.....	Twenty-sixth Separate Co.
173	Henry C. Everdell, Dec. 14, 1887.....	Twenty-third Regiment.
174	Charles F. T. Beale, Dec. 15, 1887.....	Twenty-third Separate Co.
175	Knight Neftel, Dec. 22, 1887.....	Eighth Regiment.
176	Heywood C. Broun, Jan. 3, 1888.....	I. R. P., Twenty-third Reg.
177	Theodore H. Babcock, Jan. 9, 1888.....	I. R. P., Thirteenth Regiment.
178	George G. Cochran, Jan. 16, 1888.....	Thirteenth Regiment.
179	Burnett E. Miller, Jan. 24, 1888.....	Forty-fifth Separate Company.
180	John G. Van Etten, Jan. 25, 1888.....	Fourteenth Separate Co.
181	John G. R. Lilliendahl, Jan. 25, 1888...	Twenty-second Regiment.
182	Charles H. Collins, Feb. 6, 1888.....	Eleventh Regiment.
183	Thomas A. Paterson, Feb. 8, 1888.....	Ninth Separate Company.
184	Charles A. Du Bois, Feb. 10, 1888.....	Twenty-second Regiment.
185	Harold Christensen, Feb. 13, 1888.....	Eleventh Regiment.
186	Joseph B. Rawson, Jr., Feb. 21, 1888....	Sixty-fifth Regiment.
187	Frank Roosevelt, Feb. 24, 1888.....	Twelfth Regiment.
188	Edward J. McGlynn, Feb. 29, 1888.....	Thirty-second Regiment.
189	Maxwell C. Burger, March 1, 1888.....	Thirty-second Regiment.
190	Charles C. Schoeneck, March 2, 1888....	Thirty-second Regiment.
191	Francis J. Veritzan, March 8, 1888....	Forty-seventh Regiment.
192	Arthur C. Saunders, March 9, 1888.....	Twenty-third Regiment.
193	James H. Lloyd, March 15, 1888.....	Twenty-first Separate Co.
194	Ithamar W. Copeland, March 26, 1888...	Signal Officer, Third Brigade.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(*Continued*).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Captains—(Continued).</i>		
195	Lewis E. Goodier, March 27, 1888.....	Forty-fourth Separate Co.
196	George W. Crooks, April 6, 1888... ..	Twenty-seventh Separate Co.
197	James M. Rankin, April 6, 1888.....	Eleventh Regiment.
198	John G. Butler, April 12, 1888.....	Forty-first Separate Co.
199	William R. Zimmerman, April 13, 1888..	Thirty-ninth Separate Co.
200	Walter L. Miller, April 24, 1888.....	Eleventh Regiment.
201	Chas. Newton Thompson, April 27, 1888.	Asst. Sur., Ninth Regiment.
202	Thomas D. Henry, April 30, 1888.....	Fourteenth Regiment.
203	Joseph M. Dickey, May 7, 1888.....	Tenth Separate Company.
204	Edward Annan, Jr., May 28, 1888.....	A. D. C., Second Brigade.
205	Arthur R. Jarrett, June 7, 1888.....	Asst. Sur., Thirteenth Reg.
206	Harrison C. Balcom, June 8, 1888.....	Seventy-fourth Regiment.
207	Charles H. Luscomb, June 21, 1888.....	Thirteenth Regiment.
208	Thomas J. Loughlin, July 9, 1888.....	Asst. Sur., Sixty-ninth Reg.
209	John D. Walton, Aug. 9, 1888.....	Ninth Regiment.
210	John S. Shepherd, Aug. 20, 1888.....	Twenty-third Regiment.
211	Darwin E. Vunk, Sept. 3, 1888.....	Forty-sixth Separate Co.
212	Robert M. Harding, Sept. 3, 1888.....	Seventy-fourth Regiment.
213	Frank A. Gale, Sept. 14, 1888.....	Ninth Regiment.
214	George D. Russell, Oct. 12, 1888.....	Thirty-second Regiment.
215	William Atwood French, Nov. 15, 1888..	Thirteenth Regiment.
216	Austin E. Allen, Nov. 20, 1888.....	Seventh Regiment.
217	Charles E. Lydecker, Nov. 21, 1888.....	Seventh Regiment.
218	Daniel A. Nesbitt, Nov. 22, 1888.....	Seventh Regiment.
219	James W. Finch, Dec. 3, 1888.	Twenty-second Regiment.
220	Charles G. Clemminshaw, Dec. 21, 1888..	A. D. C., Third Brigade.
<i>First Lieutenants.</i>		
1	Louis P. Haubennestel, Aug. 6, 1873....	Nineteenth Separate Co.
2	Alexander Barnie, Jr., Feb. 11, 1876....	Quarterm'r, Fourteenth Regt.
3	Charles F. Clark, May 29, 1876.	Twenty-eighth Separate Co.
4	Thomas L. Miller, April 26, 1878....	Quartermaster, 22d Regt.
5	Harvey B. Moremus, May 20, 1879.....	Thirty-third Separate Co.
6	William J. Maidhof, Nov. 22, 1880.....	Twenty-second Regiment.
7	John E. O'Brien, Dec. 6, 1880.....	Sixty-ninth Regiment.
8	Reuben Reynolds, Dec. 14, 1880.....	Twenty-third Separate Co.
9	Philip Miligan, Jan. 20, 1881.....	Com. Subst., Eighth Regt.
10	John N. Underwood, Aug. 22, 1881....	Sixth Battery.
11	James Mahoney, Dec. 6, 1881.....	Sixty-ninth Regiment.
12	Edward Milner, Jan. 10, 1882.....	Quartermaster, 47th Regt.
13	Edward R. Powers, Jan. 30, 1882.....	Quartermaster, Twelfth Regt.
14	Edwin J. Luff, Jan. 31, 1882.....	Fifth Battery.
15	Thomas Gregg, March 15, 1882.	Thirty-seventh Separate Co.
16	John W. McDougall, May 17, 1882.....	Seventh Regiment.
17	John H. Curran, May 26, 1882.....	Fourteenth Regiment.
18	Willard C. Fisk, May 29, 1882.....	Seventh Regiment.
19	Joseph Obermeyer, June 12, 1882.....	Eleventh Regiment.
20	Henry R. Clark, Aug. 5, 1882.....	Quartermaster, 74th Regiment.
21	James J. Ward, Sept. 5, 1882.....	Quartermaster, 69th Regiment.
22	Arthur A. Thompson, Sept. 18, 1882..	Quartermaster, 23d Regiment.
23	George W. Rand, Nov. 16, 1882... ..	Adjutant, Seventh Regiment.
24	Orin G. Nichols, Dec. 7, 1882.....	Com. Sub., Sixty-fifth Regt.
25	Paul F. Leonard, April 11, 1883.	Sixty-ninth Regiment.
26	William J. Sloan, April 23, 1883.....	Seventy-fourth Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>First Lieutenants—(Continued).</i>		
27	Crawford E. Fritts, April 23, 1883.....	Asst. Surgeon, 23d Sep. Co.
28	William P. McLawry, May 11, 1883.....	Asst. Surgeon, 16th Sep. Co.
29	Adelbert D. Head, May 12, 1883.....	Asst. Surgeon, 40th Sep. Co.
30	Charles F. Tupper, May 24, 1883.....	Twentieth Separate Co.
31	Almeron D. Hayes, May 29, 1883.....	Fifth Battery.
32	Charles E. Oberest, May 30, 1883.....	Seventy-fourth Regiment.
33	Daniel S. Burr, May 31, 1883.....	Asst. Surgeon, 20th Sep. Co.
34	Stuart B. Carlisle, June 14, 1883.....	Asst. Surgeon, 11th Sep. Co.
35	John Gerin, July 16, 1883.....	Asst. Surgeon, 2d Sep. Co.
36	Clarkson C. Schuyler, Aug. 23, 1883....	Asst. Surgeon, Sixth Sep. Co.
37	Benjamin L. Holt, Sept. 8, 1883.....	Asst. Surgeon, First Sep. Co.
38	John P. Wilson, Sept. 20, 1883.....	Asst. Surgeon, 19th Sep. Co.
39	John C. White, Oct. 8, 1883.....	Adj't, Seventy-fourth Regt.
40	Mason L. Smith, Oct. 23, 1883.....	Asst. Surgeon, 39th Sep. Co.
41	James F. White, Nov. 8, 1883.....	Thirty-sixth Separate Co.
42	Norman MacDonald, Nov. 12, 1883.....	Twenty-second Regiment.
43	Charles W. Crispell, Nov. 20, 1883.....	Asst. Surgeon, 14th Sep. Co.
44	John H. Wells, Nov. 23, 1883.....	Fifth Separate Company.
45	William T. Clute, Dec. 31, 1883.....	Asst. Surgeon, 36th Sep. Co.
46	William Hogan, Feb. 7, 1884.....	Sixty-ninth Regiment.
47	William Vander Clute, Jr., Feb. 15, 1884.	Adjutant, Thirty-second Regt.
48	Robert H. Sillmann, March 11, 1884.....	Thirteenth Regiment.
49	Harry A. Beneke, March 28, 1884.....	Twenty-second Regiment.
50	Franklin Bartlett, April 4, 1884.....	Ninth Regiment.
51	Benjamin C. Senton, April 4, 1884.....	Asst. Surgeon, Ninth Sep. Co.
52	Yellott D. Dechert, April 28, 1884.....	Adjutant, Ninth Regiment.
53	T. Campbell Collin, May 7, 1884.....	Seventh Separate Company.
54	Richard Oliver, May 12, 1884.....	Com. Subst., 23d Regiment.
55	John F. Long, June 2, 1884.....	Quartermaster, Seventh Regt.
56	George H. Rice, July 24, 1884.....	Fourteenth Regiment.
57	Alfred B. Campbell, Aug. 4, 1884.....	Adjutant, Fourteenth Regt.
58	John B. Woods, Sept. 1, 1884.....	Sixty-ninth Regiment.
59	George C. Schell, Nov. 7, 1884.....	Thirty-fourth Separate Co.
60	Philip Fogarty, Nov. 18, 1884.....	Sixty-fifth Regiment.
61	David Wilson, Nov. 28, 1884.....	Second Battery.
62	William H. Hubbell, Dec. 10, 1884.....	Adj't. Forty-seventh Regt.
63	William E. Otto, Jan. 13, 1885.....	Seventy-fourth Regiment.
64	George Zechiel, Jan. 26, 1885.....	Com. Subst., 32d Regiment.
65	Arthur L. Hall, Jan. 26, 1885.....	Twenty-second Separate Co.
66	Warren E. Smith, Feb. 18, 1885.....	Forty-seventh Regiment.
67	Albert L. Beahan, Feb. 21, 1885.....	Assistant in Medical Dept.
68	George E. Hall, March 13, 1885.....	Twenty-third Regiment.
69	Adolph L. Kline, March 16, 1885.....	Fourteenth Regiment.
70	Frank L. Stevens, March 20, 1885.....	Thirty-second Separate Co.
71	Charles H. McIlvaine, March 23, 1885...	Forty-seventh Regiment.
72	Samuel Parsons, April 7, 1885.....	Twelfth Regiment.
73	William D. Wood, April 10, 1885.....	Thirty-second Regiment.
74	John F. O'Connor, June 8, 1885.....	Thirteenth Regiment.
75	William Desmond, June 16, 1885.....	Sixty-ninth Regiment.
76	Walter G. Schuyler, July 31, 1885.....	Com. Subst., Seventh Regt.
77	Arthur W. Pray, Sept. 16, 1885.....	Tenth Battalion.
78	Mark J. Blakely, Sept. 24, 1885.....	Forty-first Separate Co.
79	Frederick Yung, Sept. 30, 1885.....	Quartermaster, 11th Regt.
80	Richard A. Denahan, Oct. 5, 1885.....	Eleventh Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>First Lieutenants—(Continued).</i>		
81	George T. Wilkins, Oct. 5, 1885.....	First Separate Company.
82	William A. Brown, Oct. 30, 1885.....	Thirteenth Regiment.
83	Lauren W. Pettebone, Nov. 9, 1885.....	Forty-second Separate Co.
84	William S. Banta, Nov. 16, 1885.....	Twenty-third Regiment.
85	Edwin J. Kindler, Dec. 21, 1885.....	Eleventh Separate Company.
86	Charles P. Fish, Dec. 28, 1885.....	Thirteenth Regiment.
87	Edward C. Smith, Dec. 28, 1885.....	Twelfth Regiment.
88	Alfred Jefferson, Jan. 5, 1886.....	Seventy-first Regiment.
89	Walter S. Wilson, Jan. 8, 1886.....	Seventh Regiment.
90	George W. Middleton, Jr., Jan. 21, 1886.	Twenty-third Regiment.
91	Delos M. Dodge, Feb. 8, 1886.....	Thirty-first Separate Co.
92	Samuel D. Hyatt, Feb. 25, 1886.....	Tenth Battalion.
93	Frank J. Hess, March 12, 1886.....	Eighth Separate Company.
94	William H. Chapin, March 22, 1886.....	Adjutant, Sixty-fifth Regt.
95	Peter Carroll, March 29, 1886.....	Sixty-ninth Regiment.
96	James B. Sanders, April 1, 1886.....	Adjutant, Tenth Battalion.
97	James O'Neill, April 6, 1886.....	Twenty-second Regiment.
98	John F. Clark, April 8, 1886.....	Seventy-fourth Regiment.
99	James H. Russell, April 27, 1886.....	Thirty-second Regiment.
100	William R. Owens, May 7, 1886.....	Fourteenth Regiment.
101	John H. Leonard, May 7, 1886.....	Eighteenth Separate Co.
102	Benjamin A. Church, May 8, 1886.....	Asst. Sur. Third Sep. Co.
103	Joseph T. Hull, June 7, 1886.....	Twenty-second Regiment.
104	Wm. Clarke Roe, June 11, 1886.....	Forty-seventh Regiment.
105	De Solvo H. Tift, July 12, 1886.....	Thirty-Eighth Separate Co.
106	Eugene Z. Brievogelle, Aug. 12, 1886....	Asst. Sur., First Battery.
107	John Ratcliffe, Aug. 24, 1886.....	Sixty-fifth Regiment.
108	William B. Smith, Sept. 8, 1886.....	Adj. Twenty-second Regt.
109	William B. Morrow, Sept. 10, 1886.....	Asst. Surgeon, 33d Sep. Co.
110	Willis R. Buck, Oct. 11, 1886.....	Com. of Sub., 74th Regiment.
111	Charles E. Kohlberger, Oct. 20, 1886....	Ninth Regiment.
112	William T. Miles, Nov. 1, 1886.....	I. R. P., Tenth Battalion.
113	James H. Mitchell, Nov. 10, 1886.....	Asst. Sur., Seventh Sep. Co.
114	Henry L. Cammann, Nov. 11, 1886.....	Eighth Regiment.
115	Dana P. Pratt, Nov. 19, 1886.....	Quartermaster, Ninth Regt.
116	Edward C. O'Brien, Dec. 7, 1886.....	Seventy-first Regiment.
117	Henry S. Dunning, Dec. 28, 1886.....	Second Separate Company.
118	Crawford D. Beasley, Jan. 3, 1887.....	Asst. Surgeon, Third Batt.
119	Fred B. Streeter, Jan. 7, 1887.....	Asst. Surgeon, 18th Sep. Co.
120	Harry C. Baum, Jan. 12, 1887.....	Asst. Surgeon, 41st Sep. Co.
121	William J. Whited, Jan. 17, 1887.....	Tenth Separate Company.
122	Horace C. Du Val, Feb. 10, 1887.....	Seventh Regiment.
123	Burr Mattice, Feb. 17, 1887.....	Third Separate Company.
124	William Monaghan, Feb. 23, 1887.....	Twenty-ninth Separate Co.
125	John J. Elzenbeck, Feb. 23, 1887.....	Thirty-second Regiment.
126	Frank N. Bell, March 1, 1887.....	Seventeenth Separate Co.
127	Maurice D. Quiry, March 2, 1887.....	Seventy-first Regiment.
128	Philip S. Tilden, March 10, 1887.....	Adj. Seventy-first Regiment.
129	Walter F. Nurzey, March 10, 1887.....	Sixty-fifth Regiment.
130	Henry Fred Lee, March 17, 1887.....	Forty-third Separate Co.
131	Amos E. McIntyre, March 17, 1887.....	Twenty-fourth Separate Co.
132	R. George Williams, April 1, 1887.....	Forty-seventh Regiment.
133	Jacob R. Teel, April 8, 1887.....	Quartermaster, 32d Regiment.
134	Seldon Johnson Mudge, April 12, 1887..	Asst. Surgeon, 43d Sep. Co

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>First Lieutenants—(Continued).</i>		
135	John W. Benton, April 28, 1887	Asst. Surgeon, 35th Sep. Co.
136	Robert E. Ford, May 1, 1887	Com. Sub., Sixty-ninth Regt.
137	William P. Pickett, May 2, 1887	Twenty-third Regiment.
138	John A. Quigley, May 4, 1887	Twenty-second Regiment.
139	James P. Kenworthy, May 6, 1887	Twenty-second Regiment.
140	James B. Dewson, May 7, 1887	Seventh Regiment.
141	Edward M. Hoffman, May 11, 1887	Thirtieth Separate Company.
142	J. Wilton Barlow, May 17, 1887	Forty-seventh Regiment.
143	John McCauley, May 17, 1887	Sixty-ninth Regiment.
144	Floyd B. Parke, May 20, 1887	Asst. Surgeon, 26th Sep. Co.
145	George C. Heilner, June 20, 1887	Eighth Regiment.
146	John T. Griffith, June 21, 1887	First Battery.
147	Robert H. McKittrick, June 24, 1887	Thirty-second Regiment.
148	Emile F. Christoffel, June 27, 1887	Forty-Seventh Regiment.
149	J. Emory Haskell, July 5, 1887	Com. Sub., Twelfth Regiment.
150	James Myall, July 5, 1887	Fortieth Separate Company.
151	Joseph M. Smith, July 7, 1887	Com. Sub., Twenty-sec'd Regt.
152	Geo. A. Williams, July 11, 1887	Twenty-third Regiment.
153	Charles M. Jessup, July 13, 1887	Twelfth Regiment.
154	Edgar S. Auchincloss, Aug. 1, 1887	Com. Sub., Seventy-first Regt.
155	William E. D. Stokes, Aug. 1, 1887	Quartermaster, 77th Regt.
156	Lourie Ashton, Aug. 20, 1887	Asst. Sur., 32d Separate Co.
157	William Marvin Bemus, Sept. 23, 1887 ..	Asst. Sur., 13th Separate Co.
158	John Cummings, Jr., Sept. 27, 1887	Forty-fourth Separate Co.
159	Frederick Foster Carey, Sept. 29, 1887 ..	Twelfth Regiment.
160	Peter E. Erickson, Sept. 29, 1887	Fourteenth Regiment.
161	Michael T. Carroll, Sept. 30, 1887	Asst. Sur., Second Battery.
162	Robert A. Elliott, Oct. 4, 1887	Eleventh Regiment.
163	Charles L. Spier, Oct. 10, 1887	Forty-seventh Regiment.
164	G. James Greene, Oct. 15, 1887	Tenth Battalion.
165	Clinton H. Smith, Oct. 18, 1887	Seventy-first Regiment.
166	Arthur E. Schuman, Oct. 18, 1887	Twelfth Regiment.
167	Albert J. Myer, Nov. 15, 1887	Sixty-fifth Regiment.
168	Charles Nagel, Nov. 15, 1887	First Battery.
169	Walter H. Fitz Gerald, Nov. 21, 1887	Com. Sub., Fourteenth Reg.
170	Reuben E. Fenton, Nov. 28, 1887	Thirteenth Separate Co.
171	Edward A. Hall, Dec. 5, 1887	Sixty-fifth Separate Company.
172	George B. Hinkley, Dec. 19, 1887	Sixty-fifth Regiment.
173	George H. De Vine, Dec. 22, 1887	Eighth Regiment.
174	William R. Campbell, Dec. 24, 1887	Asst. Surgeon, 42d Sep. Co.
175	Charles C. Wallace, Jan. 4, 1888	Fourteenth Regiment.
176	Edward A. Barker, Jan. 5, 1888	Eighth Regiment.
177	Charles Werner, Jan. 16, 1888	Quartermaster, 13th Reg.
178	James H. Glass, Jan. 18, 1888	Asst. Surgeon, 28th Sep. Co.
179	Wm. H. McVicar, Jan. 20, 1888	Fourth Separate Company.
180	David F. Dunsmore, Jan. 24, 1888	Forty-fifth Separate Co.
181	Theodore W. Sillocks, Jan. 25, 1888 ..	Adjutant, Twenty-third Regt.
182	Louis Hepp, Jan. 25, 1888	Eighth Regiment.
183	Russell Benedict, Jan. 26, 1888	Adjutant, Thirteenth Regt.
184	William H. B. Smith, Feb. 1, 1888	Twenty-third Regiment.
185	Wm. M. Whitney, Jr., Feb. 3, 1888	Quartermaster, Tenth Batt.
186	Jéré A. Wernberg, Feb. 6, 1888	Com. Sub., Thirteenth Regt.
187	Frank E. Van Gorden, Feb. 16, 1888	Sixteenth Separate Company.
188	Lewis G. Northrup, March 6, 1888	Sixty-fifth Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>First Lieutenants—(Continued).</i>		
189	Francis W. Higgins, March 12, 1888....	Asst. Surgeon, 45th Sep. Co.
190	Lemuel W. Finch, March 15, 1888.....	Ninth Separate Company.
191	Robert F. Tompkins, March 15, 1888....	Fourteenth Separate Co.
192	Merrill M. Dunsbaugh, March 15, 1888..	Twenty-first Separate Co.
193	Joseph O. Reed, March 17, 1888.	Asst. Sur., 24th Separate Co.
194	Arthur B. Christey, March 19, 1888.....	Sixty-fifth Regiment.
195	Charles H. Rockwell, March 23, 1888....	Twenty-second Regiment.
196	Robert A. McKim, March 26, 1888.....	Eighth Regiment.
197	Frank Harrison, April 3, 1888.....	Forty-seventh Regiment.
198	Walter S. Bennett, April 6, 1888.....	Twenty-second Regiment.
199	Edwin W. Dayton, April 9, 1888.....	Twenty-second Regiment.
200	Henry L. Fish, Jr., April 11, 1888.....	Seventy-fourth Regiment.
201	James S. Boyer, April 13, 1888.....	Thirty-ninth Separate Co.
202	John Murphy, April 16, 1888.....	Adj., Sixty-ninth Regiment.
203	Mack Hertz, April 18, 1888.....	Ninth Regiment.
204	Joseph L. Myers, April 25, 1888.....	Eighth Regiment.
205	George C. Broome, April 30, 1888.....	Thirteenth Regiment.
206	Henry M. Tienken, May 2, 1888.....	Thirteenth Regiment.
207	James H. Maconnell, May 4, 1888.....	Ninth Regiment.
208	Christopher L. Levien, May 7, 1888.....	Eleventh Regiment.
209	James G. Hunt, May 8, 1888.....	Asst. Sur., 44th Sep. Co.
210	Charles Muecke, May 9, 1888.....	Eleventh Regiment.
211	Alexander Mitzel, Jr., May 11, 1888. ...	Thirty-second Regiment.
212	David K. Case, May 14, 1888.....	Twenty-third Regiment.
213	Abbot C. Combés, May 21, 1888.....	Asst. Sur., Seventeenth Sep. Co.
214	George E. Libbey, May 28, 1888.....	Forty-seventh Regiment.
215	Neil B. McBride, May 29, 1888.....	Fourteenth Regiment.
216	Anthime W. La Rose, May 30, 1888.....	Tenth Battalion.
217	John O'Connell, May 31, 1888.....	Sixty-ninth Regiment.
218	John Rooney, June 1, 1888.....	Thirty-second Regiment.
219	Louis L. Coudert, June 4, 1888.....	Eleventh Regiment.
220	George A. Clemens, June 5, 1888.....	Com. Sub., Ninth Regiment.
221	Ernest S. Brown, June 5, 1888.....	Thirty-fifth Separate Co.
222	Francis B. Warring, June 6, 1888.....	Fifteenth Separate Co.
223	William McLoughlin, June 6, 1888.....	Sixty-ninth Regiment.
224	Sylvester E. Gregg, June 12, 1888.....	Twenty-seventh Regiment.
225	John Noble Golding, June 18, 1888.....	Seventy-first Regiment.
226	William H. Coughlin, June 18, 1888.....	Thirteenth Regiment.
227	Harry W. Putnam, June 30, 1888.....	Quartermaster, 65th Reg.
228	Peter H. Halley, July 5, 1888.....	Seventy-first Regiment.
229	John Tallmadge, July 16, 1888.....	Twelfth Separate Company.
230	Henry Cleveland, July 23, 1888.....	Ninth Regiment.
231	Wesley S. Maxson, Sept. 7, 1888.....	Thirty-second Regiment.
232	Eliphalet Hendrickson, Sept. 11, 1888..	Twenty-third Regiment.
233	William W. Hanold, Sept. 17, 1888.....	Thirteenth Regiment.
234	George L. Wentworth, Sept. 29, 1888....	Adjutant, Eighth Regiment.
235	Edward J. Kraft, Oct. 1, 1888.....	Twenty-third Regiment.
236	Augustus Baus, Oct. 3, 1888.....	Twelfth Regiment.
237	Godfrey A. S. Wieners, Oct. 4, 1888.....	Ninth Regiment.
238	Samuel B. Newton, Oct. 12, 1888.....	Seventy-fourth Regiment.
239	Henry G. Ridabock, Oct. 17, 1888.....	Quartermaster, Eighth Regt.
240	Gilbert K. Harroun, Jr., Oct. 22, 1888...	Twelfth Regiment.
241	Herbert C. Taylor, Oct. 23, 1888.....	Ninth Regiment.
242	Henry Gallup Paine, Oct. 26, 1888.....	Twelfth Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>First Lieutenants—(Continued).</i>		
243	Fred G. Peoble, Nov. 8, 1888.....	Thirteenth Regiment.
244	Stephen W. Merritt, Dec. 3, 1888.....	Seventh Regiment.
245	Thomas A. Patteson, Jr., Dec. 3, 1888...	Seventh Regiment.
246	Chas. W. Wilder, Jr., Dec. 3, 1888.....	Thirteenth Regiment.
247	Chas. W. Bridges, Dec. 3, 1888.....	Fourteenth Regiment.
248	Wallace F. Peck, Dec. 4, 1888.....	Seventh Regiment.
249	John B. Holland, Dec. 4, 1888.....	Seventh Regiment.
250	Eugene T. Kirkland, Dec. 5, 1888.....	Seventh Regiment.
251	Elias P. Mann, Dec. 13, 1888.....	Sixth Separate Company.
<i>Second Lieutenants.</i>		
1	Patrick Farrelly, June 25, 1877.....	Sixty-ninth Regiment.
2	Martell L. Beutell, Jan. 2, 1878.....	Nineteenth Separate Co.
3	James B. Manahan, May 24, 1880.....	Sixty-ninth Regiment.
4	J. M. Bellinger, Dec. 6, 1880.....	Thirty-first Separate Co.
5	Adolph E. Dick, April 20, 1881.....	Twenty-second Regiment.
6	John H. Gross, June 10, 1881.....	Sixth Battery.
7	Luke C. Quinn, May 18, 1882.....	Sixty-ninth Regiment.
8	James H. Vedder, July 29, 1882.....	Thirty-seventh Separate Co.
9	Andrew C. Harwick, Jan. 26, 1883.....	First Separate Company.
10	William H. Gadow, June 20, 1883.....	Fifth Battery.
11	Frank D. Lyon, July 2, 1883.....	Twentieth Separate Co.
12	Harrie C. Appleton, Dec. 28, 1883.....	Twelfth Regiment.
13	George F. Chatterton, May 26, 1884.....	Fortieth Separate Company.
14	Edward T. McCrystal, June 16, 1884...	Sixty-ninth Regiment.
15	Thomas J. McNeil, June 20, 1884.....	Seventh Separate Company.
16	Samuel Duncan Bell, July 1, 1884.....	Third Battery.
17	Alfred T. Rycraft, July 28, 1884.....	Twenty-eighth Separate Co.
18	Patrick J. Moriarty, Dec. 15, 1884.....	Sixty-ninth Regiment.
19	George E. Pasco, Jan. 27, 1885.....	Fifth Battery.
20	George H. Walden, March 20, 1885.....	Thirty-second Separate Co.
21	John N. Bates, March 25, 1885.....	Fifth Battery.
22	Edmund L. Knoedler, April 7, 1885.....	Twelfth Regiment.
23	Alex. E. Oberlander, April 9, 1885.....	Forty-first Separate Co.
24	Waldo L. Rich, April 20, 1885.....	Twenty-second Separate Co.
25	Gilbert Lloyd, Oct. 16, 1885.....	Fourteenth Regiment.
26	Mighells B. Butler, Nov. 9, 1885.....	Forty-second Separate Co.
27	William H. Ehrmann, Nov. 10, 1885....	Ninth Regiment.
28	William Luthy, Dec. 4, 1885.....	Thirty-second Regiment.
29	Charles R. Silkman, Jan. 18, 1886.....	Twenty-third Regiment.
30	George F. Hamlin, Jan. 21, 1886.....	Twenty-third Regiment.
31	Louis Gumbart, March 11, 1886.....	Eleventh Regiment.
32	William A. Angus, April 8, 1886.....	Seventy-fourth Regiment.
33	Robert J. Daley, April 8, 1886.....	Twenty-second Regiment.
34	Albert L. Judson, May 10, 1886.....	Tenth Battalion.
35	George E. Gatley, May 12, 1886.....	Seventy-fourth Regiment.
36	J. Edward Swanker, June 1, 1886.....	Thirty-sixth Separate Co.
37	Alonso W. Hill, June 23, 1886.....	Twelfth Separate Company.
38	James J. McKenna, June 28, 1886.....	Seventh Regiment.
39	Franklin Bouker, July 30, 1886.....	Seventh Regiment.
40	Robert T. Holly, Sept. 13, 1886.....	Twenty-third Regiment.
41	Edmund P. Cottle, Oct. 19, 1886.....	Seventy-fourth Regiment.
42	Eugene E. Bishop, Oct. 27, 1886.....	Forty-seventh Regiment.
43	Ellsworth R. De Bow, Nov. 9, 1886.....	Twenty-second Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization
<i>Second Lieutenants—(Continued).</i>		
44	Ike Freeman, Nov. 11, 1886.....	Eighth Regiment.
45	Henry Waterman, Nov. 16, 1886.....	Twenty-third Separate Co.
46	Charles B. Stone, Nov. 18, 1886.....	Seventy-first Regiment.
47	William N. Bavier, Nov. 22, 1886.....	Twenty-second Regiment.
48	Walter D. Haws, Dec. 20, 1886	Twenty-second Regiment.
49	John Lamb, Dec. 27, 1886.....	Twenty-second Regiment.
50	John J. Scanlon, Dec. 28, 1886	Sixty-ninth Regiment.
51	Frederick A. Malette, Feb. 3, 1887.....	Thirty-fourth Separate Co.
52	George H. Gould, March 1, 1887.....	Seventh Regiment.
53	William T. Gouch, March 1, 1887.....	Seventy-first Regiment.
54	Frederick W. G. Bailey, March 2, 1887..	Eighth Separate Company.
55	George P. Camman, March 5, 1887. . .	Eighth Regiment.
56	Lewis S. Stivers, March 17, 1887.....	Twenty-fourth Separate Co.
57	A. Polhemus Cobb, April 1, 1887.....	Forty-seventh Regiment.
58	Thomas T. Haviland, April 4, 1887	Tenth Separate Company.
59	Clarence James Barber, May 3, 1887....	Second Separate Company.
60	Thomas M. Close, May 11, 1887.....	Twenty-third Regiment.
61	John T. Sadler, May 11, 1887.....	Thirtieth Separate Co.
62	J. Langdon Erving, May 12, 1887.....	Twelfth Regiment.
63	John McGreevey, May 25, 1887.....	Seventh Regiment.
64	Francis J. Magee, May 26, 1887.....	Sixty-ninth Regiment.
65	Henry Deike, May 27, 1887.....	Seventy-first Regiment.
66	James H. Southworth, June 1, 1887.....	Seventy-first Regiment.
67	Emil J. Winterroth, June 15, 1887	Ninth Regiment.
68	Malcolm C. Murray, July 11, 1887	Twenty-second Regiment.
69	Clarence E. Hubbard, July 11, 1887.....	Twenty-third Regiment.
70	Dennis B. Lucey, July 14, 1887	Thirty-fifth Separate Co.
71	Alfred C. Harrison, Jr., August 9, 1887..	Forty-seventh Regiment.
72	Frank R. Wiswell, August 16, 1887.....	Thirteenth Regiment.
73	Homer L. Bartlett, August 24, 1887.....	Forty-seventh Regiment.
74	Edwin G. Bixby, Sept. 21, 1887.....	Third Separate Company.
75	Walter F. Barnes, Sept. 26, 1887.....	Third Battery.
76	Edmond A. O'Brien, Sept. 27, 1887.....	Forty-fourth Separate Co.
77	Oscar L. Rogers, Sept. 29, 1887.....	Second Battery.
78	John O. Soderstrom, Sept. 29, 1887.....	Fourteenth Regiment.
79	George A. Glynn, Oct. 17, 1887.....	Twenty-ninth Separate Co.
80	William Finkelmeier, Oct. 18, 1887.....	Thirty-second Regiment.
81	William F. Catterfield, Oct. 27, 1887.....	Twelfth Regiment.
82	Theodore Du Bois Freer, Nov. 3, 1887...	Fourteenth Separate Co.
83	Albert E. Batchelder, Nov. 12, 1887.. .	Tenth Battalion.
84	Percy P. May, Nov. 18, 1887.....	Eleventh Regiment.
85	Frederick W. Hyde, Nov. 28, 1887	Thirteenth Separate Company.
86	Warren F. H. Tupper, Nov. 30, 1887....	Eleventh Regiment.
87	George W. Dunn, Dec. 1, 1887.....	Fifth Separate Company.
88	Gustav M. Junker, Dec. 9, 1887.....	Eleventh Regiment.
89	Clark T. Roberts, Dec. 12, 1887.....	Seventy-fourth Regiment.
90	William C. Boardman, Dec. 19, 1887....	Sixty-fifth Regiment.
91	Archibald K. K. Mackay, Dec. 21, 1887..	Twelfth Regiment.
92	Fred. J. Jones, Dec. 21, 1887.....	Twenty-sixth Separate Co.
93	Thomas W. Timpson, Dec. 27, 1887.....	Seventy-first Regiment.
94	John W. West, Dec. 29, 1887.....	Ninth Regiment.
95	Adam Boecher, Dec. 30, 1887.....	First Battery.
96	Emmett J. Gray, January 2, 1888.....	Eighteenth Separate Co.
97	John T. Slingerland, Jan. 5, 1888	Eighth Regiment.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(Continued).

Number.	NAME AND DATE OF RANK.	Organization.
<i>Second Lieutenants—(Continued).</i>		
98	William C. Noble, Jan. 5, 1888.....	Fourteenth Regiment.
99	Frank D. Allen, Jan. 6, 1888.....	Twenty-seventh Separate Co.
100	Eugene A. Smith, Jan. 23, 1888.....	Sixty-fifth Regiment.
101	Joseph R. Birdlebough, Jan. 24, 1888....	Forty-fifth Separate Co.
102	Michael Lynch, Jan. 25, 1888.....	Sixty-ninth Regiment.
103	Edward W. Castell, Jan. 30, 1888.....	Fourteenth Regiment.
104	Edward Morris, Feb. 1, 1888.....	Twenty-third Regiment.
105	Ernest A. Greenough, Feb. 8, 1888.....	Ninth Separate Company.
106	William M. Despard, Feb. 10, 1888.....	Twenty-third Regiment.
107	Julian Sternberger, Feb. 13, 1888.....	Twelfth Regiment.
108	Wauhope Lynn, Feb. 16, 1888.....	Ninth Regiment.
109	William Edward Cutler, Feb. 20, 1888....	Sixty-fifth Regiment.
110	Arthur M. Tompkins, March 1, 1888....	Eleventh Regiment.
111	Leon R. Wood, March 2, 1888.....	Thirty-second Regiment.
112	Lionel E. Broun, March 2, 1888.....	Thirteenth Regiment.
113	Frederick E. Gibert, March 6, 1888....	Eighth Regiment.
114	Frederick T. Lambrecht, March 13, 1888.	Sixty-fifth Regiment.
115	D. Griffin Smith, March 16, 1888.....	Fourth Separate Company.
116	Frank M. Chapin, March 20, 1888.....	Sixty-fifth Regiment.
117	Ernest W. Dobbins, March 20, 1888.....	Sixty-fifth Regiment.
118	Edward A. Anderson, March 21, 1888....	Fourteenth Regiment.
119	Charles E. Crane, March 23, 1888.....	Twenty-second Regiment.
120	Benjamin R. Meserole, April 3, 1888....	Forty-seventh Regiment.
121	Julius W. St. John, April 6, 1888.....	Thirty-third Separate Co.
122	William J. Hussey, April 6, 1888.....	Twenty-second Regiment.
123	Samuel J. Sayle, April 25, 1888.....	Eighth Regiment.
124	Oliver Harriman, Jr., April 30, 1888....	Eighth Regiment.
125	Samuel F. Ball, May 7, 1888.....	Twenty-second Regiment.
126	William S. Gribble, May 8, 1888.....	Twelfth Regiment.
127	Harry J. McDermott, May 15, 1888.....	Fourteenth Regiment.
128	Michael Sullivan, May 22, 1888.....	Twenty-first Separate Co.
129	Charles E. Nichols, June 2, 1888.....	Sixteenth Separate Co.
130	John J. Simmons, June 12, 1888.....	Seventeenth Separate Co.
131	Charles G. Tinker, June 13, 1888.....	Thirteenth Regiment.
132	George M. Rose, June 20, 1888.....	Seventy-fourth Regiment.
133	John A. Anderson, June 21, 1888.....	Thirteenth Regiment.
134	Frank Keck, July 6, 1888.....	Seventy-first Regiment.
135	George W. Rodgers, July 13, 1888.....	Thirteenth Regiment.
136	Patrick F. McLaughlin, July 16, 1888....	Fourteenth Regiment.
137	Francis J. Monaghan, July 30, 1888....	Forty-seventh Regiment.
138	John A. Jochum, August 10, 1888.....	Thirty-second Regiment.
139	Samuel Wasserman, Sept. 3, 1888.....	Forty-sixth Separate Co.
140	Russell M. Whitney, Sept. 3, 1888.....	Forty-third Separate Co.
141	William T. Colyer, Sept. 11, 1888.....	Twenty-third Regiment.
142	Addison McDougall, Sept. 19, 1888.....	Seventh Regiment.
143	Emil Magnes, Jr., Sept. 21, 1888....	Thirty-second Regiment.
144	Harry E. Zittel, Oct. 16, 1888.....	Seventh Regiment.
145	Frederick A. Croker, Oct. 18, 1888.....	Twenty-third Regiment.
146	Dennis J. Feery, Oct. 25, 1888.....	Sixty-ninth Regiment.
147	George C. Miller, Nov. 26, 1888.....	Twenty-third Regiment.
148	William J. Underwood, Dec. 4, 1888....	Seventh Regiment.
149	Morton B. Steele, Dec. 11, 1888.....	Seventh Regiment.
150	Robert McLean, Dec. 12, 1888.....	Seventh Regiment.
151	Wait H. Stillman, Dec. 13, 1888.....	Sixth Separate Company.

RELATIVE RANK OF OFFICERS IN ACTIVE SERVICE—(*Continued*).

Number.	NAME AND DATE OF RANK.	Organization.
	<i>Second Lieutenants</i> —(Continued).	
152	Harry M. Nesbitt, Dec. 13, 1888.... .	Seventh Regiment.
	<i>Chaplains.</i>	
1	William N. Dunnell, April 15, 1874	Twenty-second Regiment.
2	Matthew P. Breen, Sept. 15, 1877	Sixty-ninth Regiment.
3	Wesley R. Davis, April 23, 1879.....	Eighth Regiment.
4	Walter North, Jan. 10, 1880.....	Seventy-fourth Regiment.
5	J. Oramel Peck, May 22, 1882.....	Fourteenth Regiment.
6	William B. Frisbie, July 1, 1882.....	Twelfth Regiment.
7	Emil Arnold Meury, Sept. 30, 1887.....	Thirty-Second Regiment.
8	John R. Paxton, Nov. 16, 1887	Seventh Regiment.
9	T. De Witt Talmage, Jan. 9, 1888.....	Thirteenth Regiment.
10	Henry A. Powell, March 7, 1888	Forty-seventh Regiment.
11	Robert R. Meredith, Nov. 26, 1888	Twenty-third Regiment.

CASUALTIES.

HONORABLY DISCHARGED—(Full Discharge).

Colonel.

James H. Jones, 12th Regt., June 5, 1888.

Lieutenant-Colonels.

William De Lacy, 69th Regt., Feb. 23, 1888.

F. C. McLewee, Asst. Inspector-General, Sept. 6, 1888.

Charles A. DeLaney, Sup., Nov. 15, 1888.

Majors.

J. Fred. Ackerman, 13th Regt., Jan. 19, 1888.

S. W. Roof, Surgeon, 9th Regt., March 2, 1888.

Clarence H. Eagle, I. R. P., 1st Brig., April 12, 1888.

A. William Ford, Surgeon, 69th Regt., June 7th, 1888.

Charles H. Stott, Jr., Quartermaster, 3d Brigade, Sept. 13, 1888.

Captains.

George Loeser, 11th Regt., Jan. 26, 1888.

Bernhard Ranft, 11th Regt., Jan. 26, 1888.

L. Frank Barry, 71st Regt., Feb. 7, 1888.

Robert H. Bond, Sup., Feb. 7, 1888.

Frank T. Bloomer, 74th Regt., Feb. 9, 1888.

Robert H. Montgomery, 65th Regt., Feb. 14, 1888.

Samuel Foster, 21st Sep. Co., Feb. 23, 1888.

James R. Miller, 39th Sep. Co., March 28, 1888.

George W. Marlette, 37th Sep. Co., April 6, 1888.

Francis Albrecht, 11th Regt., April 12, 1888.

Theodore M. Barber, 40th Sep. Co., May 28, 1888.

James E. Place, 71st Regt., June 15, 1888.

William H. Cortelyou, 22d Regt., July 11, 1888.

William R. Clough, 9th Regt., July 26, 1888.

Frederick Klontz, 11th Regt., July 26, 1888.

William F. Dent, 74th Regt., Aug. 2, 1888.

Harold L. Crane, 23d Regt., Sept. 6, 1888.

Emil Broggeworth, 32d Regt., Sept. 26, 1888.

Charles A. Denike, 47th Regt., Oct. 27, 1888.

Harry D. Cooper, 7th Regt., Nov. 16, 1888.

Andrew Mills, 7th Regt., Nov. 16, 1888.

First Lieutenants.

Joseph B. Davis, 47th Regt., Jan. 20, 1888.

Albion J. Kiernan, 10th Battalion, Jan. 27, 1888.

Frederick S. Rice, 9th Regt., Feb. 7, 1888.

Paul V. Harris, 71st Regt., March 2, 1888.

George C. Miller, 22d Regt., March 2, 1888.

James R. Boyd, 22d Regt., March 2, 1888.

Jarvis W. Mason, 11th Regt., March 17, 1888.

William W. Scott, 39th Sep. Co., March 28, 1888.

John H. M. Winne, 32d Regt., April 18, 1888, appointed August 9, 1887.

William A. Underhill, 23d Regt., May 10, 1888.

David H. Teets, 71st Regt., May 17, 1888.

W. Romeyn Vermilye, Com. Sub., 9th Regt., May 29, 1888.

Frank F. Thompson, 14th Regt., May 29, 1888.

John T. Jennings, 13th Regt., May 29, 1888.

De Witt C. Amey, Sup., June 5, 1888.

Owen Lewis, 14th Regt., Aug. 1, 1888.

P. H. Williams, Adjutant, 11th Regt., Sept. 6, 1888.

Robert Warrell, 9th Regt., Sept. 19, 1888.
 James L. Thompson, 6th Sep. Co., Oct. 27, 1888.
 Clarence M. Skellen, 22d Regt., Nov. 15, 1888.
 John A. Tackaberry, 7th Regt., Nov. 26, 1888.
 Frank Pawling, 7th Regt., Nov. 26, 1888.
 J. E. Schermerhorn, 7th Regt., Nov. 30, 1888.
 Louis G. Briggs, 12th Regt., Dec. 12, 1888, appointed Jan. 16, 1888.

Second Lieutenants.

Robert A. Hall, 9th Sep. Co., Jan. 20, 1888.
 Henry W. Brendel, 65th Regt., Feb. 7, 1888.
 Alfred H. Murphy, 22d Regt., Feb. 14, 1888.
 Theodore S. Croft, 9th Regt., Feb. 15, 1888.

Samuel T. Skinner, 13th Regt., March 9, 1888.
 Thomas F. Ryder, 22d Regt., March 9, 1888.
 George C. Robinson, 33d Sep. Co., March 16, 1888.
 James G. McMurray, 9th Regt., June 5, 1888.
 Forbes Dunderdale, 23d Regt., July 11, 1888.
 Emile R. Bangs, 71st Regt., Sept. 18, 1888.
 Wilbur B. Bradley, 7th Regt., Oct. 9, 1888.
 George D. Smith, 6th Sep. Co., Nov. 26, 1888.
 Edward J. Little, 71st Regt., Nov. 26, 1888.
 Thomas F. Kearns, 39th Sep. Co., Dec. 4, 1888.
 Joseph E. Taverner, 11th Sep. Co., Dec. 29, 1888.

HONORABLY DISCHARGED—(Resignation Accepted).

Brigadier-General.

William M. Ivins, Judge Advocate-General, April 26, 1888.

Colonel.

William W. Ladd, Asst. Judge Advocate-General, May 29, 1888.

Captains.

David F. Lucas, Asst. Sur., 13th Regt., Feb. 7, 1888.
 Daniel T. Everts, 44th Sep. Co., Feb. 24, 1888.
 Theodore H. Swift, 9th Regt., March 28, 1888.
 John J. Cosgrove, Asst. Surgeon, 69th Regt., June 7, 1888.
 Fred. C. Cocheu, 23d Regt., June 23, 1888.
 George R. Van Der Water, chaplain, 23d Regt., July 11, 1888.
 George F. Potter, 22d Regt., Oct. 3, 1888.
 John W. Brown, chaplain, 65th Regt., Dec. 21, 1888.

First Lieutenants.

Lewis M. Reed, Com. Sub., 13th Reg., Feb. 29, 1888.
 E. H. Griswold, Asst. Surgeon, 42d Sep. Co., March 22, 1888.
 Benjamin L. Love, 74th Regt., March 22, 1888.
 George Fleisher, 11th Regt., May 1, 1888.

Lawrence M. Proctor, 35th Sep. Co., May 29, 1888.
 William Brooke, 71st Regt., June 5, 1888.
 Alfred E. Steers, 14th Regt., June 6, 1888.
 J. Harry Sutterle, 13th Regt., June 15, 1888, appointed Dec. 28, 1887.
 James W. Gerard, Jr., 12th Regt., July 18, 1888.
 George F. Whitney, Asst. Surgeon, 4th Sep. Co., Oct. 31, 1888.
 William W. Chilton, 71st Regt., Nov. 30, 1888.

Second Lieutenants.

Clarence M. Davis, 71st Regt., Feb. 7, 1888.
 Robert S. Copeland, 13th Regt., March 22, 1888.
 James Alexander, 13th Regt., April 18, 1888.
 Wilbert H. Carringer, 43d Sep. Co., May 3, 1888.
 Robert P. Forsheaw, 16th Sep. Co., May 18, 1888.
 William J. Burns, 11th Regt., June 15, 1888.
 John C. McGlynn, 32d Regt., Aug. 15, 1888.
 James H. Edwards, 10th Battalion, Sept. 12, 1888.
 Thomas J. Quinlivan, 65th Regt., Oct. 26, 1888, appointed Jan. 10, 1888.
 Francis S. Drake, 65th Regt., Dec. 21, 1888, appointed Jan. 10, 1888.

DISCHARGED UNDER THE PROVISIONS OF MILITARY CODE, 43.

First Lieutenant Lawrence Buckley, 21st Separate Company, S. O., No. 5, A. G. O., Jan. 25, 1888.

VACATED COMMISSION.

Brigadier-General Daniel D. Wylie, Chief of Artillery, by expiration of term of office, Dec. 31, 1888.

Brigadier-General Frank Morgan Freeman, Quartermaster-Sergeant, by expiration of term of office, Dec. 31, 1888.

Colonel John V. L. Pruyn, Aide-de-Camp to Commander-in-Chief, by expiration of term of office, Dec. 31, 1888.

Colonel Charles E. Walker, Aide-de-Camp to Commander-in-Chief, by expiration of term of office, Dec. 31, 1888.

Colonel John F. Gaynor, Aide-de-Camp to Commander-in-Chief, by expiration of term of office, Dec. 31, 1888.

RENDERED SUPERNUMERARY.

Major Charles E. De La Vergne, Surgeon, 13th Regt., S. O., No. 13, A. G. O., Feb. 15, 1888.

Captain Newland Maynard, Chaplain, 47th Regt., S. O., No. 16, A. G. O., Feb. 29, 1888.

Captain W. F. Grotz, 32d Regt., S. O., No. 100, A. G. O., Sept. 29, 1888.

Captain Henry S. Steele, 7th Regt., S. O., No. 117, A. G. O., Nov. 16, 1888.

Captain John Raines, 25th Separate Company, S. O., No. 123, A. G. O., Dec. 6, 1888.

First Lieutenant Eugene W. Burd, Adjutant, 23d Regt., S. O., No. 5, A. G. O., Jan. 25, 1888.

First Lieutenant Charles W. Topping, Quartermaster, 13th Regt., S. O., No. 13, A. G. O., Feb. 15, 1888.

First Lieutenant James O. Johnston, Adjutant, 8th Regt., S. O., No. 53, A. G. O., May 22, 1888.

First Lieutenant Arthur F. Schermerhorn, Adjutant, 12th Regt., S. O., No. 57, A. G. O., June 5, 1888.

First Lieutenant Chas. H. Paddock, 25th Separate Company, S. O., No. 123, A. G. O., Dec. 6, 1888.

Second Lieutenant Jerome C. Fredenburg, 25th Separate Company, S. O., No. 123, A. G. O., Dec. 6, 1888.

CASHIERED.

Captain Harry A. Ely, 9th Regt., G. O., No. 25, A. G. O., Dec. 13, 1888.

DIED.

Colonel Wm. H. Brownell, Assistant Chief of Ordnance, Nov. 14, 1888.

Captain John Muldoon, Supernumerary, Feb. 11, 1887.

Captain Welcome B. Randall, 41st Separate Company, Feb. 18, 1888.

Captain Wm. V. Peacon, 14th Regt., , 1888.

CHANGES IN ORGANIZATIONS.

Organized.

45th Separate Company, Cortland, S. O., No. 9, A. G. O., Jan. 30, 1888.

46th Separate Company, Amsterdam, S. O., No. 94, A. G. O., Sept. 6, 1888.

Disbanded.

25th Separate Company, Canandaigua, S. O., No. 123, A. G. O., Dec. 6, 1888.

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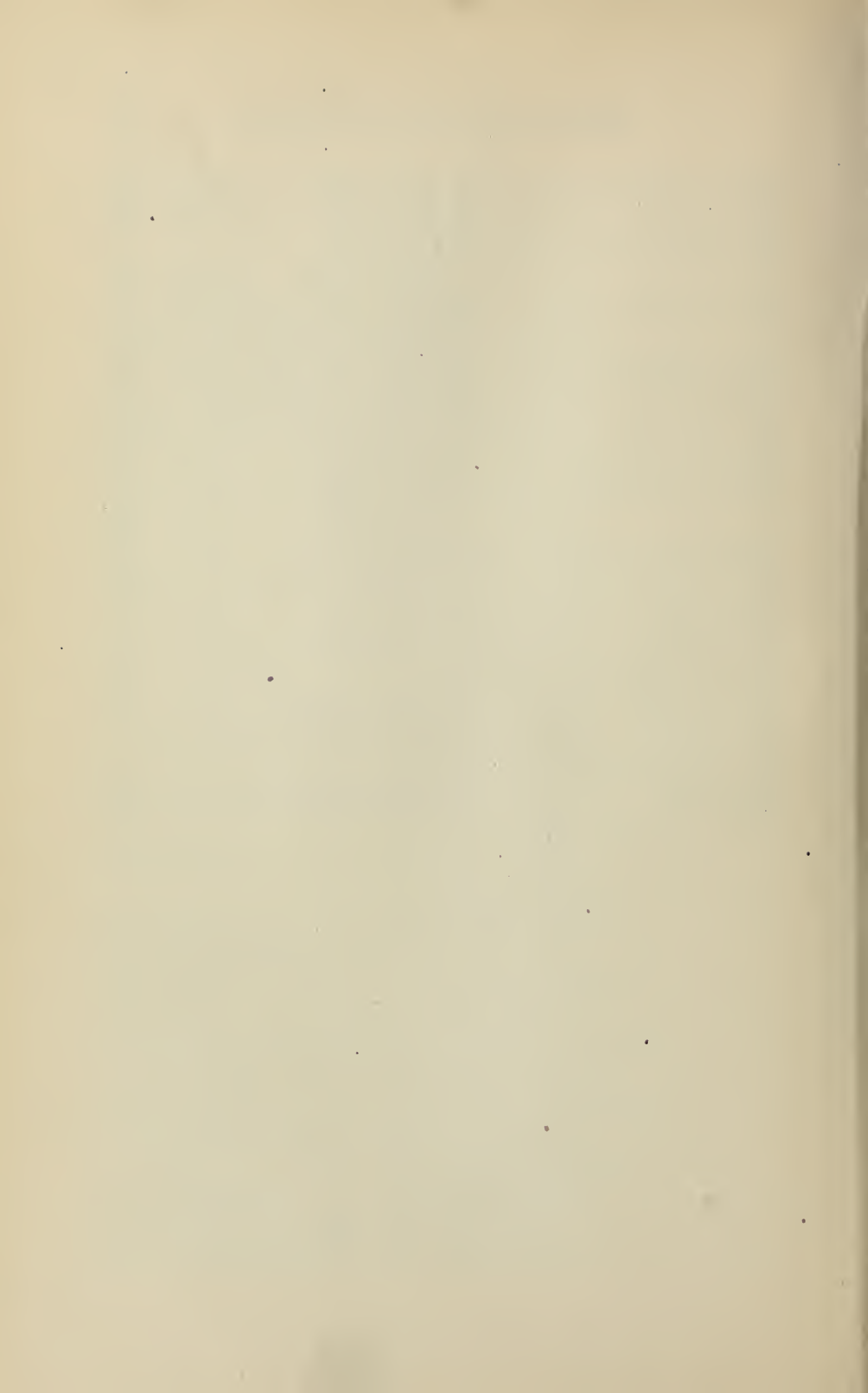
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(B.)

REPORT ON STATE CAMP.

By MAJOR R. H. JACKSON, Fifth United States Artillery.

FORT SCHUYLER, N. Y. H., *August 20, 1888.*

To the Adjutant-General, U. S. Army, Washington, D. C. :

GENERAL.—In obedience to paragraph 16, Special Orders No. 146, current series, from the Headquarters of the Army, and letter of instructions from your office dated June 26, 1888, I have the honor to report the result of my inspection and observation of the troops of the National Guard, State of New York, at the camp of instruction at Peekskill, N. Y., from the 28th day of June, to the 11th day of August, 1888.

I received the order above referred to on the twenty-seventh of June, and arrived at the camp on the twenty-eighth. The camp was opened on June sixteenth, in accordance with General Orders No. 8, General Headquarters, State of New York, Adjutant-General's office, Albany, April 13, 1888, and constituted a military post, with Major-General Josiah Porter, Adjutant-General of the State, in command.

THE TROOPS.

June sixteenth to twenty-third.—The Fourteenth Regiment and First Provisional Battalion, consisting of the Nineteenth, Twentieth, Thirty-ninth and Forty-second separate companies. I was not in camp during this week.

Date.	ORGANIZATIONS, ETC.	STRENGTH PRESENT AND ABSENT.		AVERAGE PRESENT DURING WEEK.		Average percentage of attendance.
		Officers.	Men.	Officers.	Men.	
June 23 to 30....	32d Regiment, from Brooklyn, Col. L. Finkelmeyer.....	30	406	26	295	73.54
	2d Provisional Battalion, Lieut. Col. A. C. Smith, 23d Regiment, commanding:					
	3d Separate Company	4	90	3	83	91.48
	26th Separate Company	3	89	3	79	89.12
	33d Separate Company	4	68	3	63	91.66
	36th Separate Company	4	61	3	57	92.30

Date.	ORGANIZATIONS, ETC.	STRENGTH PRESENT AND ABSENT.		AVERAGE PRESENT DURING WEEK.		Average percent- age of attend- ance.
		Officers.	Men.	Officers.	Men.	
June 30 to July 7	11th Regiment, from New York city, Col. A. P. Stewart.....	27	582	25	479	82.75
	3d Provisional Battalion, Maj. W. A. Downs, 71st Regiment, commanding:					
	1st Separate Company.....	4	60	3	58	95.31
	13th Separate Company.....	4	89	3	81	90.32
	34th Separate Company.....	3	62	3	55	89.23
	40th Separate Company.....	3	59	3	51	87.09
July 7 to 14.....	65th Regiment, from Buffalo, Col. S. M. Welch, Jr.....	33	439	29	379	86.44
	4th Provisional Battalion, Maj. H. Chauncy, Jr., 8th Regt., commanding:					
	4th Separate Company.....	4	75	3	60	79.75
	10th Separate Company.....	3	57	3	46	81.66
	18th Separate Company.....	4	54	3	46	84.48
	30th Separate Company.....	3	51	3	43	85.18
July 14 to 21.....	69th Regiment, from New York city, Col. J. Cavanaugh.....	36	930	35	685	74.53
July 21 to 28.....	13th Regiment, from Brooklyn, Col. D. E. Austen.....	32	677	30	485	72.64
	3d Battery (Gatling) from Brooklyn, Capt. H. S. Rasquin, commanding:...	5	68	5	56	83.56
July 28 to Aug. 4.	8th Regiment, from New York city, Col. G. D. Scott.....	31	459	25	375	81.61
	5th Provisional Battalion, Lieut. Col. S. C. Clobridge, 14th Regt., commanding:					
	28th Separate Company.....	4	81	2	68	82.35
	31st Separate Company.....	3	66	3	48	73.91
	37th Separate Company.....	2	76	2	62	82.05
	43d Separate Company.....	3	84	3	69	82.76
Aug. 4 to 11.. ...	6th Provisional Battalion, Maj. J. J. Riker, 12th Regiment, commanding:					
	7th Separate Company.....	4	76	4	64	85.00
	8th Separate Company.....	3	71	3	57	81.08
	12th Separate Company.....	3	86	3	63	74.16
	21st Separate Company.....	3	74	3	70	94.80
	7th Provisional Battalion, Capt. W. M. Kirby, 2d Separate Co. commanding:					
	2d Separate Company.....	4	99	2	75	74.75
	23d Separate Company.....	4	67	3	61	90.14
	27th Separate Company.....	3	57	3	52	91.67
	32d Separate Company.....	4	77	3	72	92.59
	8th Provisional Battalion, Lieut. Col. H. Dowd, 12th Regiment, commanding:					
	14th Separate Company.....	4	73	4	50	70.10
	15th Separate Company.....	2	65	2	52	80.60
	16th Separate Company.....	4	57	3	43	75.41
	24th Separate Company.....	4	69	3	56	80.82

CLOTHING.

The clothing was of the State uniform pattern, consisting of a black helmet, forage-cap, double-breasted dark blue uniform coat, light blue trousers, blue or gray overcoat, and blouse. The troops in camp this year were all supplied by the State with excellent dark blue blouses of a uniform pattern. These blouses fitted the men well and added greatly to their soldierly appearance, comfort and neatness. Some of the regiments and separate companies have white helmets and white trousers. The uniform is now very well adapted for field service; it was always clean and neat.

ARMS AND EQUIPMENTS.

The arms are the same that I reported upon when I visited this camp two years ago—the Remington rifle, caliber .50, with ordinary bayonet; the Frazier patent cartridge-box, carried on a black leather waist-belt, with a capacity for twenty rounds of ammunition. The Third Battery (Rasquin's) was armed with sabers and four mitrailleuses. The battery had no horses.

The troops were all supplied with knapsacks, canteens and haversacks. The old glazed knapsack, with a wooden frame, is still worn; it would be of very little use in active service in the field. I believe the State officers are waiting for the U. S. army authorities to adopt definitely some particular knapsack for use in field and garrison. It is to be hoped that a good serviceable knapsack, of a uniform pattern, for all foot troops, may soon be in use in all the States and territories. Colonel H. C. Merriam's knapsack, which is easily carried, of good capacity and neat appearance, is, I think, the best equipment of this character I have ever seen. The arms and accoutrements were always in a clean, serviceable condition.

The tents were the same that I reported upon in 1886; they are in good condition still, but look a little time-worn and stained. They have been well taken care of by the officers of the ordnance (quartermaster's) department. The tents were supplied with light cots, mattresses, camp-stools, pails, tin cups, wash-basins and candle-sticks. Good, serviceable red blankets of uniform size were issued to the troops while in camp.

The troops were rationed by contract. The mess-hall had a dining capacity for about a thousand men. The kitchen and mess-hall were marvels of neatness and comfort. The food was excellent and well cooked. There was an excellent corps of waiters. The commissary officer and contractors understood their business, and performed it in a thoroughly satisfactory manner.

THE STAFF DEPARTMENTS.

The quartermaster's department, subsistence department, and ordnance department in camp were in charge of Brigadier-General Joshua M. Varian, chief of ordnance of the State, and his assistant, Colonel Joseph G. Story, ordnance department. Colonel Story was post quartermaster, post commissary and post ordnance officer. The camp was laid out, the tents pitched and everything

placed in order before the arrival of the troops. This was done by hired laborers working under the direction of Colonel Story. The camp and garrison equipage, etc., was transferred by the post quartermaster to the regimental and battalion staff officers upon the arrival of the troops, and at the end of the week's encampment the property was duly accounted for and retransferred to the post quartermaster, and so on from week to week during the instruction season. I do not think that many articles were lost; the system was a good one.

The troops were transported to and from the camp under contracts made by the chief of ordnance (acting quartermaster-general) with steamboat and railroad companies. They arrived and departed at the hours named in the schedule. The quartermaster's department was well arranged, and the whole machinery of transportation worked smoothly and pleasantly.

As I have stated before, the troops were fed by contract. Provision returns were made by company commanders; these were consolidated at regimental and battalion headquarters and forwarded to post headquarters for approval and orders. The returns were made for meals, so that if a man were absent from breakfast, dinner, or supper, the State would not have to pay for the meals not eaten. The post adjutant examined these returns carefully, and approved them when correctly made out, and directed the post commissary of subsistence to furnish the number of meals called for. The system worked admirably and the interests of the State were well conserved.

The ordnance department proper had very little to do in camp. The State allows powder for a morning and evening gun. Four salutes were fired from light twelve-pounders for the Governor of the State on the days he visited the camp. Blank cartridges were issued to the infantry for skirmishing and battalion drills. Colonel Story was kept busily employed in attending to all these departments, but he had a thorough knowledge of his duties and responsibilities, and never neglected to perform them properly.

MEDICAL DEPARTMENT.

Surgeon-General Joseph D. Bryant had charge of the medical department. He made weekly visits to the camp. The dispensary and hospital tents were always in good order. The regimental and other surgeons and assistant surgeons were careful and

prompt in the discharge of their duties. They were relieved weekly. The hospital stewards were also attentive and prompt. No one but a duly examined and licensed pharmacist is permitted to act as hospital steward. The surgeons and assistant surgeons were required to inspect the camp daily, and to report its condition in writing to the post adjutant. These reports were rendered twice a day. The latrines, drains, bath-houses, kitchen, and mess-hall had to be duly inspected and their condition reported.

There was very little sickness in camp. There was one severe case of double pneumonia, that of a private of the Sixty-ninth Regiment, but he was so well taken care of and so skillfully treated that he was able to walk when the camp was broken up on the eleventh of August. He was taken sick on the eighteenth of July. The medical department was well and skillfully organized by the surgeon-general.

PAY DEPARTMENT.

The pay-rolls were made out and submitted to the post adjutant for verification, and by him turned over to the paymaster, so as to be ready for the payments on the last day of each week just before the troops departed from camp. Colonel E. L. Judson, aide-de-camp, was the paymaster. Checks were drawn for each officer and man, and great care was observed in the payments, which were rapidly conducted.

INSPECTOR-GENERAL'S DEPARTMENT.

There was no inspection by any officer of this department while the troops were in camp. The troops are regularly inspected at their armories by the authorized inspectors.

TARGET PRACTICE.

There was no target firing in camp. This practice is conducted at the home ranges, and is, I was informed, carefully attended to. The week's service in camp is wholly given to skirmishing and such battalion and company drills as can not be taught in the armories.

INSTRUCTION.

There were two drills daily, company drill before guard mounting and battalion drill from 9.30 A. M. to 11.30 A. M. Dress parade at retreat. The dress parades and guard mountings were, as a

rule, very creditably executed, and it was pleasant to observe the decided improvement in these ceremonies made by each command during its week in camp. The company drills were nearly all devoted to skirmishing. The battalion drills were, with some few exceptions, only in such movements as could not be executed in the armories. There were some good battalion skirmish drills by all the battalions, but notably by the Sixty-fifth and Thirteenth regiments and some of the provisional battalions. A great deal more attention was paid to this instruction in the camp this year than there was two years ago. I noticed that at battalion drills a good deal of the time was taken up by the battalion commanders in explaining at great length the duties of company commanders, guides, etc., while the battalions were kept standing at attention or at a rest. This greatly retarded the drills and wearied the commands. Battalion commanders should, I think, fully instruct the officers and sergeants in the movements to be executed before the battalions are formed for drill. This would do away with the necessity for long harangues on the drill ground, where more movements could be executed in a given time. I know that some of the battalion commanders adopted this system with great benefit to their commands.

The drills and ceremonies were very well conducted, and great improvement was made by all the regiments and separate companies during their tours of duty at the camp.

DISCIPLINE.

The discipline was very good, indeed. During the week the Eleventh Regiment was in camp there was some little disorder occasioned by some of the men of that organization absenting themselves without leave for the purpose of visiting the beer and whisky shops in the village of Annsville. Proper remedies were adopted and the absenteeism checked by the post commander. With this exception, the good order in camp was remarkable. The men behaved admirably and were obedient and respectful. There was no noise in camp between taps and reveille, and no horseplay or tomfoolery at any time. Every officer and man seemed fully impressed with the idea that the camp of instruction was a place in which the duties of soldiers were to be learned, and not a place for disorder of any kind. Military courtesy, as a rule, was strictly observed. The police of the camp, and its sur-

roundings, was thoroughly attended to by the camp inspector, Captain Horatio P. Stacpole, Tenth Battalion, and the medical officers of the various commands.

Guard duty was well performed, particularly so during the last days in camp of the different commands. There were a good many in camp who had never been on guard, and it was not to be wondered at if some of them made mistakes when first posted as sentinels. The officers of the day and of the guards, as well as the non-commissioned officers, were required to visit and instruct the sentinels of each relief, and to see that each sentinel performed his duty properly. Captain N. B. Thurston, Twenty-second Regiment, who was detailed by the post commander as instructor of guards, is a thoroughly competent officer. He generally assembled the details the day before they mounted guard, and instructed the officers, non-commissioned officers and privates in the duties they would be called on to perform during their tours of guard duty. It was instructive and exceedingly interesting to listen to these lectures, and observe how attentively the audience, comfortably seated upon camp-stools in the shade, followed the captain as he described, step by step, the duties of officers, sergeants, corporals and sentinels while on guard. He used a large blackboard, upon which he delineated the camp and the sentinels' posts, etc. He also made frequent inspections of the guards and sentinels, and caused all irregularities and inattention to be corrected.

GENERAL REMARKS.

The facilities for placing the troops in a condition for active service are, so far as I can judge, very good, indeed. The staff officers of the State are zealous and competent, and their system of transporting, clothing and feeding of troops is a really excellent one. The regimental and company officers are generally well instructed, but I noticed a good many subalterns and three or four captains who were careless and inefficient. * * *

The Sixty-fifth Regiment, from Buffalo, has made great progress in drill and discipline since I saw it two years ago. Colonel Welch, its commanding officer, has improved it very much since he obtained the command. The Sixty-ninth is a superb body of men. They are evenly sized and of splendid physique, manly, soldierly and teachable. Colonel Cavanagh is proud of his regiment, and he has very good reason to feel so. The Thirty-second

Separate Company, from Hoosick Falls, was, without doubt, the best drilled company in camp this year; its manual of arms, marching, etc., were as near perfection as possible; it was a pleasure to see it on the drill-ground, and to observe how well, and without noise, the guides and file-closers performed their duties. The Thirteenth Separate Company, from Jamestown, is a large, splendid, well-drilled company. The Thirtieth Separate Company, from Elmira, although small in numbers, presented a fine appearance. The Thirty-seventh Separate Company, from Schenectady, was well drilled and disciplined. In fact, nearly all of the separate companies were in good military shape, and the provisional battalions formed from them were easily handled and made rapid progress in drill during their respective tours of duty in camp. The three provisional battalions in camp during the last week were splendid bodies of men; they are a credit to the National Guard of the State. The officers selected to command the provisional battalions, and whose names are given in this report, were well qualified for their duties. They were zealous and indefatigable in their exertions to improve their commands, and I am happy to state that they were eminently successful.

The Governor of the State made four visits to the camp this year. His first visit was made the week before my arrival, and I did not, therefore, witness the ceremonies which took place on that occasion. During the other three visits salutes were fired upon his arrival by detachments of artillery from the First (Wendell's) and Second (Earle's) batteries; light twelve-pounders were used for this purpose. The Governor reviewed the troops that were in camp when he made his visits, and all of the ceremonies performed on these occasions were conducted in a strictly military manner.

This camp is well named a camp of instruction, and its commanding officer, General Porter, has certainly succeeded in the formation of a uniform system of instruction for the National Guard of the State. The camp has been greatly improved since my visit of two years ago by a perfect system of drainage, and by the erection on the grounds of bath-houses and water-closets.

Colonel Fred. Phisterer, the Assistant Adjutant-General of the State, was the post adjutant. He instructed the adjutants of regiments and battalions as well as the first sergeants of companies. All returns, reports, rolls and papers of every kind

passed through his hands. My report of two years ago upon the conduct of business in the adjutant's office of the camp is also true of this year.

In conclusion, I desire to thank General Porter and the officers of his staff for the courtesy and kindness extended to me during my official visit to the camp at Peekskill.

I am, General, very respectfully, your obedient servant.

R. H. JACKSON,

Major Fifth Artillery, Bvt. Brig. Gen., U. S. Army.

(C.)

GENERAL ORDERS, CIRCULARS AND OPINIONS OF THE JUDGE ADVOCATE-GENERAL.

STATE OF NEW YORK :

OFFICE OF THE JUDGE ADVOCATE-GENERAL,
STEWART BUILDING, 280 BROADWAY,
NEW YORK, *February 4, 1888.* }

Major-General JOSIAH PORTER, *Adjutant-General, N. G., S. N. Y.:*

SIR. — I have the honor to acknowledge the receipt of the return of appointment of the Rev. William S. Rainsford as chaplain of the Seventy-first Regiment, N. G., with the rank of captain, and of the statement as to his eligibility and fitness, submitted to the examining board of the First Brigade by such appointee.

Upon these papers inquiry is asked whether Mr. Rainsford is eligible to the position to which he has been appointed upon the statement furnished as to his citizenship. An examination of the records of the United States Circuit Court in this city shows that Mr. Rainsford, on December 6, 1887, declared his intention of becoming a citizen. He has not taken out citizenship papers, nor can he do so under the law for some time to come. He was not at the time of his appointment, nor is he now, a citizen of the United States, and I am of the opinion that his case comes within the broad language used in M. C. 24, which provides that "no person shall be commissioned in the militia or National Guard of this State unless he is a citizen of the United States," and that no commission can be legally issued to him until such date as he shall have taken out his final papers of citizenship."

I return herewith the document submitted, and have the honor to remain

Very respectfully yours.

WM. M. IVINS,
Brigadier-General and Judge Advocate-General.

168 NASSAU STREET.
NEW YORK, June 14, 1888. }

The Adjutant General, S. N. Y.:

SIR.—I have the honor to acknowledge the receipt of a communication from Colonel William Seward, Jr., Ninth Regiment, National Guard of the State of New York, containing the following question which you referred to me for my opinion: “If men duly enlisted but not uniformed, can be returned as delinquents if absent from parade ordered pursuant to law?”

A soldier's first duty is obedience to orders and from the moment a man enlists in the National Guard he owes that duty to his superior officers. It is not his privilege to question or criticise the propriety of their acts. Whether uniformed or not uniformed he must report for duty whenever and however ordered so to do. The Military Code has wisely made provision empowering the officer who orders a parade, drill or encampment, to excuse any officer or enlisted man for absence therefrom upon good and sufficient grounds (M. C., § 124). It is to be presumed that this power will be properly exercised, and under ordinary circumstances the fact that an enlisted man has not been provided with a uniform will be accepted by the officer ordering his attendance as a good and sufficient ground for excusing him from duty. The fact alone, however, that he is not uniformed is no excuse for his disobeying orders or absenting himself from attendance. He must attend and, having attended, leave the matter of his excuse to the officer commanding his presence.

It consequently follows that men duly enlisted but not uniformed must be returned as delinquent if absent from parade without excuse. I have the honor to remain

Very respectfully.

CLIFFORD A. H. BARTLETT,

Judge Advocate-General, S. N. Y.

NEW YORK, September 4, 1888.

The Adjutant-General, State of New York:

SIR.—I have the honor to acknowledge the receipt of a communication from Brigadier General Louis Fitzgerald, First Brigade, National Guard of the State of New York, relating

to Captain Archibald Rogers. The question referred to me for my opinion is whether Captain Rogers can be taken up on the supernumerary list, he having been rendered supernumerary August 5, 1886, but never having reported as required by law and regulations.

An officer who has been rendered supernumerary continues to be supernumerary whether he reports himself as such to the Adjutant-General or not. In case of his failure so to report he is, however, not exempt from military duty. The Legislature has enacted that if supernumerary officers shall, within one year from the date of being rendered supernumerary, and yearly thereafter, report themselves as such to the Adjutant-General they shall be exempt from military duty except in case of war, insurrection or invasion. Supernumerary officers who do not report can not be assigned to active duty nor can they enjoy the privileges, emoluments and immunities to which commissioned officers of the same grade in the National Guard on active duty are entitled. (M. C., § 44.)

Officers can cease to be such only by the action of the Commander-in-Chief (Regulations 214) and all officers discharged from the service of the State shall receive a certificate of discharge in such form as the Commander-in-Chief shall direct. (M. C., § 43.)

There is nothing to prevent the Commander-in-Chief from restoring to the roster the name of a supernumerary officer who has not reported and whose name has consequently been dropped therefrom. Whether his name is on the roster or not, an officer rendered supernumerary continues to be a supernumerary officer. The fact of keeping a roster can not affect his status or rank in the service except so far as has been indicated.

I have the honor to remain.

Very respectfully yours.

CLIFFORD A. H. BARTLETT,

Judge Advocate-General, State of New York.

NEW YORK, *September 4, 1888.**The Adjutant-General, State of New York :*

SIR.—I have the honor to acknowledge the receipt of a communication from Captain L. E. Goodier, Forty-fourth Separate Company, National Guard State of New York, referred to me for my opinion as to when his company became entitled to its first allowance of \$250.

The Forty-fourth Separate Company was mustered into the National Guard, September 27, 1887. The Military Code provides that on the certificate of the Adjutant-General, the Comptroller shall draw his warrant upon the Treasurer in favor of each county treasurer specified in such certificate, for the organizations of the National Guard mentioned therein, as follows: * * * Two hundred and fifty dollars for each separate company; and for each regiment, battalion, troop, battery, separate company and signal corps, for the purpose of defraying other necessary military expenses, a sum equal to eight dollars for each of the enlisted men present for duty, based upon the percentage present for duty for the year at the five compulsory parades required in section 68 (M. C., § 98).

Section 68, above referred to, provides that officers — other than general and staff-officers — and enlisted men, shall be obliged to perform, during the year, not less than five compulsory drills and parades, including inspection and muster and camp duty.

It is evident that the year referred to in both the foregoing sections is the calendar year; that is, for instance, the year 1887 or 1888, from January to December inclusive. But whatever doubt there might have been on the subject is removed by referring to the regulations, which provide that to obtain the allowance granted by the State to regiments, battalions, troops, batteries and separate companies by section 98, Military Code, commanding officers will forward to the Adjutant-General a consolidated return of attendance at five compulsory parades during each calendar year, within ten days after the expiration of the year. (Regulations, 773).

The Forty-fourth Separate Company is not, therefore, entitled to receive its first allowance until after December 31, 1888. Between September 27, 1887, and January 1, 1888 — that is, during the calendar year 1887 — its officers and enlisted men did

not perform at least five compulsory parades, nor should three months be substituted in place of a year when the latter was apparently the only period within the intention of the Legislature in making provision for the allowance to be paid to the organizations composing the National Guard.

I have the honor to remain,

Very respectfully yours.

CLIFFORD A. H. BARTLETT,
Judge Advocate-General, State of New York.

NEW YORK, *September 17, 1888.*

The Adjutant-General, State of New York:

SIR. — I have the honor to acknowledge the receipt of a communication from Captain John G. Butler, Forty-first Separate Company, National Guard State of New York, which was referred to me for my opinion on the following questions :

First. Can the officer in question hold his commission as second lieutenant while holding the commission of justice of the peace?

Second. Did his office as second lieutenant become vacant (if it was vacated) upon his acceptance of the commission of justice of the peace?

Third. Is such officer (holding both commissions) amenable to the military law and the regulations governing the National Guard of the State of New York?

To the first question I answer yes.

To the second question I answer no.

To the third question I answer yes.

The Military Code, which specifically provides what persons are exempted from military duty, does not exempt justices of the peace (M. C., § 1.) The officer in the present case became a commissioned officer in the National Guard prior to his election as a justice of the peace, so that the question is not embarrassed by any considerations of improper enrollment, election or enlistment. Having been eligible to hold a commission in the National Guard at the time of his election, he is liable to the performance of military duty, although he has been elected to a judicial office. There was no necessity for his accepting the latter office, and if its duties are such as to render the faithful performance of

military duty impossible, the opportunity to resign is always open to him.

In the case of *Wise v. Withers* (3 Cranch., 330), it was held that the plaintiff, who was a justice of the peace for the county of Alexandria, appointed by the President, was exempt from military duty under the express language of the United States statute, which, in enumerating the persons who should not be enrolled, exempted judicial and executive officers of the United States. This is the authority referred to by Ives in his work on military law (p. 35).

Neither is the present case like that of *State v. Martindale* (1 Bailey, 163), where the Court of Appeals of South Carolina granted a writ of prohibition restraining the officers of the Charleston Neck Rangers from enforcing the collection of fines imposed upon Hon. William Johnson, an associate justice of the Supreme Court of the United States, for the non-performance of patrol duty. In that case it was held that the duties were wholly incompatible; for that when one duty is inconsistent with and paramount to another the citizen is bound to discharge that of superior obligation (p. 167).

I have the honor to remain,

Very respectfully yours.

CLIFFORD A. H. BARTLETT,
Judge Advocate-General, State of New York.

NEW YORK, November 1, 1888.

The Adjutant-General, State of New York:

SIR.—I have the honor to acknowledge the receipt of your communication requesting my opinion as to whether Captain Archibald Rogers may be assigned to active duty.

Captain Rogers having been rendered supernumerary, failed to report within one year thereafter, or, in fact, at all. The law governing his case is to be found in section 44 of the Military Code, before the amendment of 1888 took effect. The section as it then stood provided that the Commander-in-Chief might assign those supernumerary officers to active duty who had reported to the Adjutant-General within one year from the date of being rendered supernumerary and yearly thereafter. The well

recognized rule, *expressio unius est exclusio alterius*, should be applied here. The Legislature has seen proper to limit the right of the Commander-in-Chief to assign supernumerary officers to active duty in certain specified cases and this excludes all others. In order to claim the right of being assigned to active duty the supernumerary officer must show a compliance with the statute. This is a condition precedent to his being assigned to active duty and any omissions on his part to report as directed by law must exclude him from among the supernumerary officers who can be assigned to active duty by the Commander-in-Chief. In fact, under the law as it now is and has been for several years, supernumerary officers who have neglected to report as provided by statute, while still officers, in fact have ceased to be of any service or advantage to the State for the reason that the Commander-in-Chief is deprived by law of the power to assign them to active duty.

I am therefore of the opinion that Captain Rogers can not be assigned to active duty.

I have the honor to remain

Very respectfully yours.

CLIFFORD A. H. BARTLETT,
Judge Advocate-General State of New York.

NEW YORK, November 28, 1888.

The Adjutant-General State of New York:

SIR.—I have the honor to acknowledge the receipt of a communication from Colonel David E. Austen, Thirteenth Regiment, National Guard State of New York, asking whether a commanding officer can properly detail himself as president of a delinquency court in his own command.

I am of the opinion that he can not. The Military Code prescribes for the appointment of delinquency courts for the trial of enlisted men, which is to be made by the commander of the regiment, and is to consist of one officer in his command. (M. C., § 104). The commanding officer of a regiment or battalion is not an officer *in* his command within the intention of the Legislature. That it was not the purpose of the Legislature that a delinquency court should consist of the officer ordering the court is apparent

from section 117 of the Military Code. This section provides that the proceedings and sentence of any delinquency court shall, without delay, be delivered to the officer ordering the court, who shall approve or disapprove of the same within fifteen days thereafter, and shall notify the delinquent of his approval or disapproval thereof; and from the sentence of any such court imposing a fine or penalty for any delinquency, the person tried may appeal within twenty days after notification of the fine or penalty, and *the officer ordering the court*, or his successor in command, may remit or mitigate such penalty or fine.

If the commander of a regiment could act as the president of a delinquency court ordered by himself he would, in the first place, have to without delay deliver the proceedings and sentence to himself for his own approval or disapproval; and in the second place, being the officer ordering the court, he would have to hear any appeals that might be taken from his own sentence and sit in judgment reviewing his own decision. The preservation of the right of appeal by the Legislature means what it purports to secure to the delinquent—the right of having the proceedings and sentence reviewed by a new and different tribunal from that which originally heard and determined the case. It does not mean a rehearsing before the same court, which would be the case if the court consisted of the officer ordering it, to wit, the commander of the regiment.

I have the honor to remain,

Very respectfully yours.

CLIFFORD A. H. BARTLETT,
Judge Advocate-General State of New York.

GENERAL ORDERS.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, }	ADJUTANT-GENERAL'S OFFICE,	}
No. 1.	ALBANY, <i>January 2, 1888.</i>	

The following changes have occurred during the month of December, 1887, among the commissioned officers of the National Guard, State of New York :

COMMISSIONED.

First Battery.

John F. Griffith, First Lieutenant, with rank from June 21, 1887, vice Moss, resigned.

Charles Nagel, First Lieutenant, with rank from November 15, 1887, Original.

Ninth Regiment.

Washington Willcocks, Captain, with rank from November 22, 1887, vice Chamberlain, resigned.

Joseph N. Billings, Captain, with rank from November 23, 1887, vice Mulligan, resigned.

Eleventh Regiment.

George Fleischer, First Lieutenant, with rank from September 1, 1887, vice Schuman, resigned.

Warren F. H. Tupper, Second Lieutenant, with rank from November 30, 1887, vice Miller, promoted.

Fourteenth Regiment.

Peter E. Erickson, First Lieutenant, with rank from November 29, 1887, vice Christensen, resigned.

John O. Soderstrom, Second Lieutenant, with rank from September 29, 1887, vice Molin, resigned.

Twenty-third Regiment.

Alexis C. Smith, Lieutenant-Colonel, with rank from December 5, 1887, vice Bacon, resigned.

Henry C. Everdell, Captain, with rank from December 14, 1887, vice Haviland, resigned.

Thirty-second Regiment.

John C. McGlynn, Second Lieutenant, with rank from December 12, 1887, vice Edward J. McGlynn, promoted.

Sixty-fifth Regiment.

George J. Metzger, Inspector of Rifle Practice, with the rank of Captain, with rank from November 1, 1887, vice Menker, retired.

Edward A. Hall, First Lieutenant, with rank from December 5, 1887, vice Babcock, promoted.

Fourth Separate Company.

John J. Pruyn, Captain, with rank from November 26, 1887, vice Cobb, resigned.

Fifth Separate Company.

George W. Dunn, Second Lieutenant, with rank from December 1, 1887, vice Little, elected Second Lieutenant in Seventy-first Regiment.

RESIGNED.

Date.	Organization.	NAME.	Office.
1887.			
Dec. 10	29th Sep. Co.....	Dillon F. Acker.....	First Lieut. and Asst. Surg.
" 10	18th Sep. Co.....	James W. Reed.....	Second Lieutenant.
" 14	12th Regt.....	Henry S. Kaliske.....	Second Lieutenant.
" 14	13th Regt.....	James de Mandeville.....	Captain.
" 20	12th Regt.....	Daniel S. Appleton, Jr.....	First Lieutenant.
" 21	65th Regt.....	Edward S. DeForest.....	Second Lieutenant.
" 21	.....	Walter E. Colton.....	Captain, supernumerary.
" 22	23d Regt.....	Wm. H. Greenland.....	Captain and Insp. R. P.
" 28	10th Sep. Co.....	William H. Smith.....	Captain.
" 29	17th Sep. Co.....	Joseph Fitch.....	Second Lieutenant.

HONORABLY DISCHARGED.

Captain J. Bryant Lindley, Assistant Quartermaster (S. O. No. 110, series 1887).

RENDERED SUPERNUMERARY.

Lieutenant-Colonel Albert L. David, Assistant in Department of Rifle Practice (S. O. No. 107, series 1887).

Captain Benjamin J. Hornbeck, Fourteenth Separate Company (S. O. No. 112, series 1887).

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

ADJUTANT-GENERAL'S OFFICE,

GENERAL ORDERS, }
No. 2.ALBANY, *February 1, 1888.* }

I. The following changes have occurred during the month of January, 1888, among the commissioned officers of the National Guard, State of New York :

COMMISSIONED.

Pay Department.

Walter C. Stokes, Paymaster-General, with the rank of Brigadier-General, with rank from January 16, 1888, vice Bryce, resigned.

First Battery.

Adam Boecher, Second Lieutenant, with rank from December 30, 1887, vice Nagel, promoted.

Eighth Regiment.

Knight Neftel, Captain, with rank from December 22, 1887, vice McLean, resigned.

George H. DeVine, First Lieutenant, with rank from December 22, 1887, vice Cunningham, promoted.

Ninth Regiment.

John D. Walton, First Lieutenant, with rank from December 22, 1887, vice Swift, promoted.

Twelfth Regiment.

John Macaulay, Inspector of Rifle Practice, with the rank of Captain, with rank from December 31, 1886, vice de Forest, resigned.

Archibald K. K. Mackay, Second Lieutenant, with rank from December 21, 1887, vice Jesup, promoted.

Thirteenth Regiment.

David E. Austen, Colonel, with rank from July 13, 1877, vice Fackner, resigned.

Fourteenth Regiment.

Walter H. Fitz Gerald, Commissary of Subsistence, with the rank of First Lieutenant, with rank from November 21, 1887, vice Nutt, promoted.

Twenty-third Regiment.

William E. Spencer, Surgeon, with the rank of Major, with rank from November 28, 1887, vice Lewis, resigned.

Henry L. Cochran, Assistant Surgeon, with the rank of Captain, with rank from November 28, 1887, vice Spencer, promoted.

Heywood C. Broun, Inspector of Rifle Practice, with the rank of Captain, with rank from January 3, 1888, vice Greenland, resigned.

Theodore W. Sillocks, Adjutant, with the rank of First Lieutenant, with rank from January 25, 1888, vice Burd, rendered Supernumerary.

Thirty-second Regiment.

Edward Verdeckberg, Major, with rank from January 6, 1888, vice Parisette, resigned.

Sixty-fifth Regiment.

John B. Rawson, Jr., First Lieutenant, with rank from November 22, 1887, vice Seaman, resigned.

Seventy-first Regiment.

Thomas W. Timson, Second Lieutenant, with rank from December 27, 1887, vice Smith, promoted.

Thirteenth Separate Company.

Reuben E. Fenton, First Lieutenant, with rank from November 28, 1887, vice Ljungburg, resigned.

Frederick W. Hyde, Second Lieutenant, with rank from November 2, 1887, vice Caldwell, resigned.

Eighteenth Separate Company.

Emmet J. Gray, Second Lieutenant, with rank from January 2, 1888, vice Reed, resigned.

Twenty-third Separate Company.

Charles F. T. Beale, Captain, with rank from December 15, 1887 vice Elting, resigned.

Forty-Fifth Separate Company.

Burnett E. Miller, Captain, with rank from January 24, 1888, original.

David F. Dunsmoor, First Lieutenant, with rank from January 24, 1888, original.

Joseph R. Birdlebough, Second Lieutenant, with rank from January 24, 1888, original.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Jan. 4	.....	Robert Shaw Oliver	Brigadier-General.
" 6	16th Sep. Co.....	W. Irving Osborn.....	First Lieutenant.
" 19	13th Regt.....	J. Fred. Ackerman.....	Major.
" 20	47th Regt.....	Joseph B. Davis.....	First Lieutenant.
" 20	9th Sep. Co.....	Robert A. Hall.....	Second Lieutenant.
" 26	11th Regt.....	George Loeser.....	Captain.
" 26	11th Regt.....	Bernhard Rauff.....	Captain.
" 27	10th Battn.....	Albion J. Kiernan	First Lieutenant.

DISCHARGED.

First Lieutenant Lawrence Buckley, Twenty-first Separate Company, pursuant to M. C. 43—special orders No. 5, c. s.

RENDERED SUPERNUMERARY.

First Lieutenant Eugene W. Burd, Adjutant Twenty-third Regiment—special orders No. 5, c. s.

II. The following company has been organized:

In the Fourth Brigade.

Forty-fifth Separate Company, at Cortland. Special orders No. 9, dated January 30, 1888. Mustered into service January 24, 1888.

DIED.

Second Lieutenant Edward F. Young, Seventh Regiment, December 21, 1887.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, }	ADJUTANT-GENERAL'S OFFICE,	}
No. 3.	ALBANY, March 1, 1887.	

I. The following changes have occurred during the month of February, 1888, among the commissioned officers of the National Guard, State of New York:

COMMISSIONED.

Eighth Regiment.

Louis Hepp, First Lieutenant, with rank from January 25, 1888, vice Van Rensselaer, resigned.

John T. Slingerland, Second Lieutenant, with rank from January 5, 1888, vice Pentz, promoted.

Eleventh Regiment.

Gustav M. Junker, Second Lieutenant, with rank from December 9, 1887, vice Seliger, resigned.

Twelfth Regiment.

Louis G. Brigg, First Lieutenant, with rank from January 16, 1888, vice Griffith, resigned.

Thirteenth Regiment.

T. De Witt Talmage, Chaplain, with the rank of Captain, with rank from January 9, 1888, vice Beecher, deceased.

John A. Cochran, Assistant Surgeon, with the rank of Captain, with rank from January 23, 1888, vice Lucas, resigned.

Theodore H. Babcock, Inspector of Rifle Practice, with the rank of Captain, with rank from January 9, 1888, vice Babcock, resigned.

Charles Werner, Quartermaster, with the rank of First Lieutenant, with rank from January 16, 1888, vice Topping, rendered supernumerary.

Jeré A. Wernberg, Commissary of Subsistence, with the rank of First Lieutenant, with rank from February 6, 1888, vice Reed, resigned.

George G. Cochran, Captain, with rank from January 16, 1888, vice De Mandeville, resigned.

Fourteenth Regiment.

Charles C. Wallace, First Lieutenant, with rank from January 4, 1888, vice Crane, promoted.

William C. Noble, Second Lieutenant, with rank from January 5, 1888, vice Harvey, resigned.

Edward W. Castell, Second Lieutenant, with rank from January 30, 1888, vice Clark, resigned.

Twenty-second Regiment.

Charles A. Du Bois, Captain, with rank from February 10, 1888, vice Jenkins, resigned.

Twenty-third Regiment.

William H. B. Smith, First Lieutenant, with rank from February 1, 1888, vice Everdell, promoted.

Edward Morris, Second Lieutenant, with rank from February 1, 1888, vice Smith, promoted.

William M. Despard, Second Lieutenant, with rank from February 10, 1888, vice Sillocks, promoted.

Thirty-second Regiment.

John H. M. Winne, First Lieutenant, with rank from August 9, 1887, vice Strining, promoted.

Sixty-fifth Regiment.

George B. Hinkley, First Lieutenant, with rank from December 19, 1887, vice Hicks, resigned.

William C. Boardman, Second Lieutenant, with rank from December 19, 1887, vice De Forest, resigned.

Frank S. Drake, Second Lieutenant, with rank from January 10, 1888, vice Rawson, promoted.

Thomas J. Quinlivan, Second Lieutenant, with rank from January 10, 1888, vice Tanner, resigned.

Sixty-ninth Regiment.

Michael Lynch, Second Lieutenant, with rank from January 25, 1888, vice McMorrow, resigned.

Seventy-fourth Regiment.

Clark T. Roberts, Second Lieutenant, with rank from December 12, 1887, vice Ralston, resigned.

Fourth Separate Company.

William H. McVicar, First Lieutenant, with rank from January 20, 1888, vice Pruyn, promoted.

Twenty-sixth Separate Company.

Robert P. Bush, Captain, with rank from December 1, 1887, vice Root, resigned.

Fred. J. Jones, Second Lieutenant, with rank from December 21, 1887, vice Crispin, discharged.

Twenty-ninth Separate Company.

George A. Glynn, Second Lieutenant, with rank from October 17, 1887, vice Perkins, resigned.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Feb. 4	71st Regt.....	L. Frank Barry	Captain.
" 7	13th Regt.....	David F. Lucas	Capt. and Asst. Surgeon.
" 7	71st Regt.....	Clarence M. Davis	Second Lieutenant.
" 7	9th Regt.....	Frederick S. Rice	First Lieutenant.
" 7	.....	Robert H. Bond	Captain, supernumerary.
" 7	65th Regt.....	Henry W. Brendel	Second Lieutenant.
" 14	65th Regt.....	Robert H. Montgomery	Captain.
" 14	22d Regt.....	Alfred H. Murphy	Second Lieutenant.
" 15	9th Regt.....	Theodore S. Croft.....	Second Lieutenant.
" 23	69th Regt.....	William De Lacy.....	Lieutenant-Colonel.
" 23	21st Sep. Co.....	Samuel Foster	Captain.
" 24	44th Sep. Co.....	Daniel T. Everts.....	Captain.
" 29	13th Regt.....	Lewis M. Reed.....	First Lt. and Com. of Sub.

RENDERED SUPERNUMERARY.

Major Charles E. De La Vergne, Surgeon, Thirteenth Regiment.
(Special Orders No. 13, c. s.)

First Lieutenant Charles W. Topping, Thirteenth Regiment.
(Special Orders No. 13, c. s.)

DIED.

Captain Welcome B. Randall, Forty-first Separate Company, February 18, 1888.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, {	ADJUTANT-GENERAL'S OFFICE,	}
NO. 4.	ALBANY, <i>March 8, 1888.</i>	

I. Commanding officers of brigades, regiments and battalions will forward direct to the General Inspector of Rifle Practice, No. 8 Coenties Slip, New York city, on or before April 15, 1888, a list containing the full name, rank and position of each member of their respective staffs on April 1, 1888:

II. Commanding officers of companies, and of such batteries as may be armed with rifles, will also forward in same manner lists of their commands containing full name and rank of each member.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, {	ADJUTANT-GENERAL'S OFFICE,	}
NO. 5.	ALBANY, <i>April 1, 1888.</i>	

The following changes have occurred during the month of March, 1888, among the commissioned officers of the National Guard, State of New York :

COMMISSIONED.

Ninth Regiment.

John W. West, Second Lieutenant, with rank from December 29, 1887, vice Anketell, resigned.

Wanhope Lynn, Second Lieutenant, with rank from February 16, 1888, vice Walton, promoted.

Tenth Battalion.

William M. Whitney, Jr., Quartermaster, with the rank of First Lieutenant, with rank from February 3, 1888, vice Batchelder, resigned.

Eleventh Regiment.

Charles H. Collins, Captain, with rank from February 6, 1888, vice Ranft, resigned.

Harold Christensen, Captain, with rank from February 13, 1888, vice Loser, resigned.

Arthur M. Tompkins, Second Lieutenant, with rank from March 1, 1888, vice Fleischer, promoted.

Twelfth Regiment.

Frank Roosevelt, Captain, with rank from February 24, 1888, vice McCauley, appointed Inspector of Rifle Practice.

Julian Sternberger, Second Lieutenant, with rank from February 13, 1888, vice Kaliske, resigned.

Thirteenth Regiment.

Lionel E. Brown, Second Lieutenant, with rank from March 2, 1888, vice Macumber, promoted.

Twenty-second Regiment.

John G. R. Lilliendahl, Captain, with rank from January 25, 1888, vice West, resigned.

Twenty-third Regiment.

Arthur C. Saunders, Captain, with rank from March 9, 1888, vice Smith, promoted.

Thirty-second Regiment.

Henry C. Clark, Lieutenant-Colonel, with rank from February 24, 1888, vice Wunder, resigned.

Edward J. McGlynn, Captain, with rank from February 29, 1888, vice Verdeckberg, promoted.

Charles C. Schoeneck, Captain, with rank from March 2, 1888, vice Pettenkofer, resigned.

Leon R. Wood, Second Lieutenant, with rank from March 2, 1888, vice Elzenbeck, promoted.

Forty-seventh Regiment.

Henry A. Powell, Chaplain, with the rank of Captain, with rank from March 7, 1888, vice Maynard, rendered supernumerary.

Francis J. Veritzan, Captain, with rank from March 8, 1888, vice Ranken, resigned.

George E. Libbey, Second Lieutenant, with rank from March 8, 1888, vice Swett, resigned.

Sixty-fifth Regiment.

Joseph B. Rawson, Jr., Captain, with rank from February 21, 1888, vice Montgomery, resigned.

Eugene A. Smith, Second Lieutenant, with rank from January 23, 1888, vice Hall, promoted.

Ninth Separate Company.

Thomas A. Paterson, Captain, with rank from February 8, 1888, vice Parke, resigned.

Ernest A. Greenough, Second Lieutenant, with rank from February 8, 1888, vice Hall, resigned.

Fourteenth Separate Company.

John G. Van Etten, Captain, with rank from January 25, 1888, vice Hornbeck, rendered supernumerary.

Sixteenth Separate Company.

Frank E. Van Gorden, First Lieutenant, with rank from February 16, 1888, vice Osborn, resigned.

Twenty-seventh Separate Company.

Frank D. Allen, Second Lieutenant, with rank from January 6, 1888, vice Plumb, resigned.

Twenty-eighth Separate Company.

James H. Glass, Assistant Surgeon, with the rank of First Lieutenant, with rank from January 18, 1888. Original.

Forty-second Separate Company.

William R. Campbell, Assistant Surgeon, with the rank of First Lieutenant, with rank from December 24, 1887, vice Griswold, resigned.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Mar. 2	71st Regt.....	Paul V. Harris.....	First Lieutenant.
" 2	9th Regt.....	Stephen W. Roof.....	Major and Surgeon.
" 2	22d Regt.....	George C. Miller.....	First Lieutenant.
" 2	22d Regt.....	James R. Byrd.....	First Lieutenant.
" 9	13th Regt.....	Samuel T. Skinner.....	Second Lieutenant.
" 9	22d Regt.....	Thomas F. Ryder.....	Second Lieutenant.
" 16	33d Sep. Co.....	George C. Robinson.....	Second Lieutenant.
" 17	11th Regt.....	Jarvis W. Mason.....	First Lieutenant.
" 22	42d Sep. Co.....	Edward H. Griswold.....	First Lieut. and Ass't Surg.
" 22	74th Regt.....	Benjamin L. Love.....	First Lieutenant.
" 22	13th Regt.....	Robert S. Copeland.....	Second Lieutenant.
" 28	39th Sep. Co.....	James R. Miller.....	Captain.
" 28	39th Sep. Cy.....	William W. Scott.....	First Lieutenant.
" 28	9th Regt.....	Theodore H. Swift.....	Captain.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE,

GENERAL ORDERS, }
No. 6.

ALBANY, April 6, 1888. }

I. The annual inspection and muster of the organizations named below will take place as follows:

Thirty-first Separate Co.	Mohawk	Tuesday	May 1, 2.00 P. M.
Twenty-eighth Separate Co.	Utica	Wednesday	May 2, 2.00 P. M.
Forty-fourth Separate Co.	Utica	Thursday	May 3, 2.00 P. M.
Fifth Battery	Syracuse	Monday	May 7, 8.00 P. M.
Fortieth Separate Co.	Syracuse	Tuesday	May 8, 8.00 P. M.
Forty-first Separate Co.	Syracuse	Tuesday	May 8, 9.00 P. M.
Twenty-ninth Separate Co.	Oswego	Wednesday	May 9, 8.00 P. M.
Thirty-eighth Separate Co.	Oswego	Wednesday	May 9, 9.00 P. M.
Thirty-ninth Separate Co.	Watertown	Thursday	May 10, 2.00 P. M.
Twenty-seventh Sep. Co.	Malone	Tuesday	May 15, 2.00 P. M.
Forty-third Separate Co.	Olean	Tuesday	May 15, 2.00 P. M.
Ninth Separate Co.	Whitehall	Wednesday	May 16, 2.00 P. M.
Thirteenth Separate Co.	Jamestown	Wednesday	May 16, 8.00 P. M.
Eighteenth Separate Co.	Glens Falls	Thursday	May 17, 2.00 P. M.
Eighth Separate Co.	Rochester	Thursday	May 17, 8.00 P. M.
Seventy-fourth Regiment	Buffalo	Tuesday	May 22, 8.00 P. M.
Sixty-fifth Regiment	Buffalo	Wednesday	May 23, 8.00 P. M.
Forty-second Separate Co.	Niagara Falls	Thursday	May 24, 2.00 P. M.
Twenty-second Separate Co.	Saratoga	Tuesday	May 29, 2.30 P. M.
Thirty-sixth Separate Co.	Schenectady	Wednesday	May 30, 2.30 P. M.
Thirty-seventh Separate Co.	Schenectady	Wednesday	May 30, 2.30 P. M.
Seventh Separate Co.	Cohoes	Thursday	May 31, 2.30 P. M.
Thirty-second Separate Co.	Hoosick Falls	Thursday	May 31, 2.30 P. M.
Twelfth Separate Co.	Troy	Tuesday	June 5, 2.30 P. M.
Twenty-first Separate Co.	Troy	Tuesday	June 5, 8.00 P. M.
Sixth Separate Co.	Troy	Wednesday	June 6, 8.00 P. M.
Twenty-third Separate Co.	Hudson	Wednesday	June 6, 8.00 P. M.
Fourteenth Separate Co.	Kingston	Thursday	June 7, 2.00 P. M.
Sixteenth Separate Co.	Catskill	Thursday	June 7, 2.00 P. M.
Fifth Separate Co.	Newburgh	Tuesday	June 12, 8.00 P. M.
Tenth Separate Co.	Newburgh	Tuesday	June 12, 9.00 P. M.
Fifteenth Separate Co.	Poughkeepsie	Wednesday	June 13, 3.00 P. M.
Nineteenth Separate Co.	Poughkeepsie	Wednesday	June 13, 3.00 P. M.
Fourth Separate Co.	Yonkers	Thursday	June 14, 3.00 P. M.
Eleventh Separate Co.	Mount Vernon	Thursday	June 14, 3.00 P. M.

II. Commanding officers will parade their respective commands in heavy marching order; cartridge boxes will be worn in front; overcoats rolled on knapsacks; forage cap in the knapsack.

III. Commanding officers will prepare their muster-rolls and forward the same promptly to the Inspector-General at Albany, as required by R. 593 (sixth clause). "Inspection arms," will be executed as prescribed in tactics.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE,

GENERAL ORDERS, }
No. 7.

ALBANY, April 13, 1888. }

I. Rifle practice will be required the current season of every officer and enlisted man (excepting officers and men of batteries not armed with rifles, and musicians) at times and places to be designated in orders by brigade commanders.

II. When a command has had an opportunity for a first general practice, the brigade commander may, upon the application of its immediate commanding officer, appoint a subsequent day, or days, for voluntary practice. Commanding officers may excuse members of their respective commands from the first general practice, provided they attend a regularly ordered voluntary practice.

III. The actual cost of transportation, but in no case to exceed fifty cents, will be allowed for every officer and enlisted man attending the first general practice of his organization, provided that the distance to its nearest available range is more than three miles.

IV. The present allowance of ammunition for practice is limited to forty rounds for each officer, non-commissioned officer and private carried on the returns for the quarter ending March 31, 1888.

V. Requisitions for transportation and ammunition will be made direct on the Chief of Ordnance, State Arsenal, corner Seventh avenue and Thirty-fifth street, New York city.

VI. Scores made, in any class, at a regular rifle association match, in which the full military conditions, including uniform, are observed, and which is approved by the General Inspector of Rifle Practice, will be recognized as official. Such practice will not, however, excuse absence from first general practice as ordered.

VII. Record books of field practice must be kept written up in ink. Alterations in score cards must be certified to by an Inspector of Rifle Practice. After each practice the score cards will be compared under the supervision of the senior Inspector of Rifle Practice present; the left half will be forwarded by such officer to the General Inspector of Rifle Practice within five days after the practice, the other half will be retained by the commanding officer of the organization practicing.

VIII. The State prize will be competed for at Creedmoor as usual. The brigade prizes will be competed for under such conditions as shall be ordered by the commanding officers of brigades. A prize of a value not to exceed fifty dollars will be awarded the company in each brigade having the highest general figure of merit. Attention is called to R. 372, the last clause of which applies to the successful teams of 1885, 1886 and 1887.

IX. The first general practice should be completed before August first, but *must* be completed before September fifteenth next. Practice for the season will close November tenth next, and no scores made after that date will be recognized. Field practice books, fully written up, must be sent to the General Inspector of Rifle Practice, No. 8 Coenties Slip, New York city, on or before November 17, 1888.

X. The classification, order of duty and general instructions, prepared by the General Inspector of Rifle Practice, are herewith published for the guidance and observance of all concerned :

CLASSIFICATION.

The third class shall consist of all who do not appear on a range for practice.

The second class consists of all present for practice, without reference to qualifications in previous years, and the practice in this class will be at 100 yards standing, on a third class or No. 3 target, and at 200 yards kneeling, or sitting, on a third class or No. 3 target.

The first class consists of those who score twenty-five and upward in the second class, and the practice in this class will be at 200 yards standing, No. 3 target, and at 500 yards lying prone, No 2 target.

A score of twenty-five and upward in the first class constitutes a marksman, and entitles the maker to receive the State decoration.

A score of forty-two and upward in the first class constitutes a sharpshooter, and entitles the maker to receive a silver bar.

All officers and enlisted men who practice must shoot through the regular classes, and are prohibited from shooting for a second or higher score in a class in which they have already qualified. The record must stand upon the first qualifying score made. But should any marksman without expense to the State, on other than a practice day, and under proper supervision, make a score qualifying as a sharpshooter, he will be credited with such score.

No score by officer or enlisted man will be recognized unless made at a target to which he has been regularly assigned, and where his name has been previously entered on a score blank.

FIRST GENERAL PRACTICE.

(a.) The practice will commence with class firing in squads, under a competent non-commissioned officer, or other duly designated instructor, at each firing point, and the whole under the supervision of an Inspector of Rifle Practice, subject to the orders of the commanding officer present.

Five consecutive shots will be fired at each distance.

This practice will be continued to the end by all present without reference to the scores recorded, except that those who fail to qualify in the second class may be restricted to two shots for practice at each of the higher ranges.

The practice at 500 yards may be postponed until after the course of firing in ranks.

In regular class practice no officer or enlisted man will be permitted to fire more than five consecutive shots at any one distance on the same day, except the necessary sighting shots to ascertain elevation, windage and the condition of pieces, which may be fired by officers or well-instructed men, under the inspection or approval of an Inspector of Rifle Practice. Trial practice between classes will not be permitted.

At the first distance of either class (*i. e.*, at 100 or 200 yards) a score of *twelve* or upwards is considered as qualifying, and *second* practice may be allowed to such men as fail to qualify at either distance (as above), provided time will permit; but *third* practice shall not be allowed in any case. If, however, the entire tour of duty, including volley and skirmish firing, has been performed, and time still permits, such practice may be had as the Inspector of Rifle Practice deems proper.

Those who may have qualified at 200 and 500 yards, but not at 100 and 200, may make their scores valid by practicing through the second class without shooting in the first again.

In regular practice each enlisted man will shoot with the piece issued by the State, and brought by him on the ground, unless the same is declared imperfect by an Inspector of Rifle Practice. In that case the man may shoot with the nearest approved piece in the ranks.

(*b.*) *Volley Firing, Five Rounds.*—Firing in ranks at 100 yards shall then be taken up in the following order, the squad or company being formed in single rank:

Fire by squad [or company], three rounds.

Fire by squad [or company], kneeling, two rounds.

(*c.*) *Firing as Skirmishers.*—The troops shall be exercised as skirmishers from 325 to 100 yards and return; firing, on the advance, one round at 300 yards, one at 200 yards, and one at 100 yards; and on the retreat, one round at 150 yards, and one at 250 yards; great care being taken by each commanding officer that the men are deliberate and cautious, that no accident may happen. Officers should use discretion and tact, varying the drill according to their ground and targets, deploying men and taking such distances as targets and range will allow; each body of troops to be so divided that no more may be exercised at one time than can be readily handled on the range, a second-class target being used.

As soon as the last (fifth) shot is fired, assemble on the right (or left), thus leaving the front uncovered, so that the second squad or company may deploy; during this time the marking can be done.

Commanding officers are particularly cautioned to use great care in handling their men, having the element of safety in view at all times.

SECOND OR VOLUNTARY GENERAL PRACTICE.

Those present will practice in the classes to which they respectively belong. In other respects the tour of duty will be identical with that prescribed for first general practice, including volley firing and firing as skirmishers.

GENERAL INSTRUCTIONS.

Officers.—A sufficient number of commissioned officers must accompany all parties for rifle practice to command and instruct the men. At least one company officer will be present with any part of his company on duty, and a field officer will take command of all the detachments of two or more companies.

In practice officers shall shoot first, then non-commissioned officers, then privates, on such targets as may be assigned to their companies.

The responsibility of officers on the range is great. Good officers will be theoretically proficient in the use of the rifle and able to apply armory instruction in the field. The men will be instructed as much as possible while waiting their turns to shoot, and especially in aiming and position drill, for which a competent instructor should be detailed in each company. They should be taught how to blacken their sights and how to fix the correct elevation and windage before going to the firing points.

Surgeons.—Commanding officers shall, in all cases, detail a surgeon to accompany any party ordered out for rifle practice, and the duty should not proceed without the presence of a competent medical officer, provided the organization has one attached to it.

Inspection of Practice.—Brigade Inspectors of Rifle Practice will inspect the practice for the marksman's decoration (except in authorized matches), and Brigade or Regimental Inspectors the class shooting in their respective organizations and certify to the score cards.

Organizations having no Inspector of Rifle Practice will be inspected by the Brigade Inspector, or an officer detailed for that purpose.

An inspector who is not able to be personally present on any occasion of duty will so report to his commanding officer, who will then detail a competent officer to act in his stead.

Brigade commanders will, on issuing any order relating to rifle practice, cause a copy to be sent to the General Inspector of Rifle Practice.

Wooden targets for volley, and [where needed] for skirmish firing, should be erected without expense to the State on each range. A simple fence painted to represent the necessary lines or divisions, or a frame covered with paper or muslin painted, if backed by a mound

sufficient for safety, will suffice. Iron targets, second class, may be used for skirmish drill, but must not be used for volley firing.

Front sight covers of such pattern as may be easily detached will be allowed in practice for the marksman's badge—but they must not be permanently attached to the rifle.

Particular attention is called to the fact that the 300-yard range was eliminated from class practice in 1886, and that five shots kneeling or sitting at 200 yards was substituted for it; also that the volley firing will be performed in single rank.

XI. Members of the National Guard in uniform (coat or blouse, cap and belt), may practice under such supervision and with such competent instructors as the General Inspector of Rifle Practice may direct.

AT CREEDMOOR,

May second, third, fourth, fifth, seventh, eighth, ninth, tenth, eleventh and twelfth; June thirteenth; July twenty-first; August fifteenth; September twelfth; October third and twentieth.

AT RENSSELAERWYCK,

June fourth, sixth, eighth and ninth; July seventh; August fourth; September first; October sixth and twenty-seventh.

AT BAY VIEW,

June thirteenth, fourteenth, fifteenth and sixteenth; July seventh; August fourth; September first; October sixth and twenty-seventh; and the scores made upon these days, at 200 and 500 yards, of twenty-five and over, may qualify for the marksman's badge, *if in the opinion of the General Inspector of Rifle Practice they are deserving of it.* This practice will not, however, excuse absence from the first general practice.

The General Inspector of Rifle Practice will arrange the necessary details for this practice.

XII. The commanding officers of brigades may, upon the application of their respective commanding officers, assign to separate companies, excepting the Fourth, Sixth, Seventh, Eleventh, Twelfth, Seventeenth and Twenty-first, not to exceed two days for additional voluntary practice, under the following conditions: The practice to be before July 1, 1888, under the usual regulations and in uniform; supervised by at least one officer, assisted by as many other competent instructors as possible.

The scores to be kept in duplicate, one copy to be retained by the commanding officer and the other to be forwarded within five days

after the practice to the General Inspector of Rifle Practice, State of New York, and the officer present at the practice to certify on honor on the score cards to the correctness of the scores made.

The practice to be at 100 yards standing and at 200 yards kneeling or sitting; at least three scores for each man at each distance; if, after all present have had ample opportunity for practice and instruction sufficient time remains, practice may be held at 500 yards lying prone, but not to exceed ten shots per man.

To qualify in this practice in the *second class* two or more of the scores made must be at least fifteen points at 100 yards, and thirteen points at 200 yards.

On receipt of the score cards the General Inspector of Rifle Practice will inform the commanding officer of the respective separate company, *who, of those practicing have in his opinion qualified in the second class*, and these men will be entered upon the company records accordingly and not allowed to practice further in that class.

Ammunition for this practice may be drawn, *if needed*, in the manner already prescribed (see section 5), but not to exceed thirty rounds per man.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, }	ADJUTANT-GENERAL'S OFFICE,	}
No. 8. }	ALBANY, April 13, 1888.	

I. The following organizations are detailed for tours of service at the camp of instruction :

The Eighth Regiment from July 28 to August 4, 1888.

The Eleventh Regiment from June 30 to July 7, 1888.

The Thirteenth Regiment from July 21 to July 28, 1888.

The Fourteenth Regiment from June 16 to June 23, 1888.

The Thirty-second Regiment from June 23 to June 30, 1888.

The Sixty-fifth Regiment from July 7 to July 14, 1888.

The Sixty-ninth Regiment from July 14 to July 21, 1888.

The First Separate Company from June 30 to July 7, 1888.

The Second Separate Company from August 4 to August 11, 1888.

The Third Separate Company from June 23 to June 30, 1888.

The Fourth Separate Company from July 7 to July 14, 1888.

The Seventh Separate Company from August 4 to August 11, 1888.

The Eighth Separate Company from August 4 to August 11, 1888.

The Ninth Separate Company from August 4 to August 11, 1888.

The Tenth Separate Company from July 7 to July 14, 1888.

The Thirteenth Separate Company from June 30 to July 7, 1888.

The Fourteenth Separate Company from August 4 to August 11, 1888.

The Fifteenth Separate Company from August 4 to August 11, 1888.

The Sixteenth Separate Company from August 4 to August 11, 1888.

The Eighteenth Separate Company from July 7 to July 14, 1888.

The Twenty-first Separate Company from August 4 to August 11, 1888.

The Twenty-second Separate Company from June 16 to June 23, 1888.

The Twenty-third Separate Company from August 4 to August 11, 1888.

The Twenty-fourth Separate Company from August 4 to August 11, 1888.

The Twenty-sixth Separate Company from June 23 to June 30, 1888.

The Twenty-seventh Separate Company from August 4 to August 11, 1888.

The Twenty-eighth Separate Company from July 28 to August 4, 1888.

The Twenty-ninth Separate Company from June 16 to June 23, 1888.

The Thirtieth Separate Company from July 7 to July 14, 1888.

The Thirty-first Separate Company from July 28 to August 4, 1888.

The Thirty-second Separate Company from August 4 to August 11, 1888.

The Thirty-third Separate Company from June 23 to June 30, 1888.

The Thirty-fourth Separate Company from June 30 to July 7, 1888.

The Thirty-sixth Separate Company from July 28 to August 4, 1888.

The Thirty-seventh Separate Company from July 28 to August 4, 1888.

The Thirty-ninth Separate Company from June 16 to June 23, 1888.

The Fortieth Separate Company from June 30 to July 7, 1888.

The Forty-second Separate Company from June 16 to June 23, 1888.

The Forty-third Separate Company from June 23 to June 30, 1888.

The separate companies detailed for the same period will form provisional battalions, as follows :

The Twenty-second, Twenty-ninth, Thirty-ninth and Forty-second Separate Companies the First Battalion.

The Third, Twenty-sixth, Thirty-third and Forty-third Separate Companies the Second Battalion.

The First, Thirteenth, Thirty-fourth and Fortieth Separate Companies the Third Battalion.

The Fourth, Tenth, Eighteenth and Thirtieth Separate Companies the Fourth Battalion.

The Twenty-eighth, Thirty-first, Thirty-sixth and Thirty-seventh Separate Companies the Fifth Battalion.

The Seventh, Eighth, Ninth and Twenty-first Separate Companies the Sixth Battalion.

The Second, Fifteenth, Twenty-third and Thirty-second Separate Companies the Seventh Battalion.

The Fourteenth, Sixteenth, Twenty-fourth and Twenty-seventh Separate Companies the Eighth Battalion.

II. For service in camp a band will be furnished by the State and regimental bands and band-leaders will therefore not be taken to the camp.

III. The detail of officers for service at the camp as post-commander and his staff-officers, as commanding and medical officers of the provisional battalions will be announced later, but only such assistant surgeons of the separate companies as will be specially detailed will accompany their respective companies to the camp.

IV. The following general regulations, established for the government of the camp of instruction when occupied by troops, promulgated by General Order No. 20, series 1887, from this office, are republished for the information and guidance of all concerned, and the attention of all officers is specially called to them:

I. The camp is constituted a military post, and will be conducted in accordance with the rules provided for the government of military posts, and these regulations:

The post-commander will prescribe in orders the hours and calls of service and the duties to be performed, subject to section 1 of part II of General Orders No. 4, c. s., but no reviews will be authorized except by orders from this office.

He will prescribe the amount of camp and garrison equipage and blank ammunition to be issued to the troops in camp.

2. The chief of ordnance, as such, and as acting quartermaster-general and acting commissary-general of subsistence, will cause the camp of instruction to be prepared in time for its occupancy by troops. He will provide and keep on hand at the camp the necessary quartermaster and ordnance stores, and after consultation with the surgeon-general, the necessary medical stores and supplies; he will

provide, by contract, for the furnishing of cooked meals to the troops in camp, and will see that the meals are properly and promptly furnished, well cooked, of wholesome quality and sufficient quantity; he will furnish the necessary transportation to officers and enlisted men ordered there, to and from the camp; and he will exercise, in camp, a general supervision of all public property not by law and regulations in the care of others, the mess arrangements and the public buildings and grounds.

Transportation for troops to the camp will be furnished, as far as practicable, in such manner that they will arrive at the camp not later than 3 o'clock P. M. of the day ordered.

3. The surgeon-general is charged with the general supervision and direction of the medical service at the camp and is authorized to select one competent person, who shall have charge, under his direction, of the medical stores at the camp, and who shall receive for his services transportation, rations and the pay allowed by law to hospital stewards.

4. The paymaster-general is charged with the payment of the troops, on the last day of their tour in camp, and will take the necessary measures to pay each person entitled thereto, in accordance with sections 2 and 4 of paragraph II of General Orders No. 4, c. s., from these headquarters.

5. Commanding officers of regiments, battalions, batteries and separate companies, and officers specially detailed, if not traveling with troops, will at once, upon notice of detail of camp service, make requisition for proper transportation of men and baggage from their station to the camp of instruction, direct, on the acting quartermaster-general, the chief of ordnance, State arsenal, Thirty-fifth street and Seventh avenue, New York city. Commanding officers will specify the exact number of men, as nearly as possible, for whom transportation is required, and transportation will not be allowed for men who, under sections 2 and 4 of paragraph II of General Orders No. 4, c. s., from these headquarters, will not be entitled to pay. On arrival in camp, or as soon thereafter as practicable, commanding officers of troops arriving by railway transportation will settle their transportation accounts with the acting quartermaster-general, the chief of ordnance. Transportation will be allowed for one servant for the officers of each company and the field and staff of a battalion, and for three servants for the field and staff of a regiment.

Horses for field officers will be furnished by the post quartermaster, and transportation or forage will not be allowed for any other horses.

On the journey to and from, and the march into camp, the senior officer will command the troops present, and before leaving their stations commanding officers will telegraph to the post commander the strength of their command, servants separately.

6. Surgeons of regiments and assistant surgeons of separate companies detailed for camp service, if traveling with troops, will each make timely requisition, through their immediate commanding officers, for a hospital knapsack, with medical stores and instruments, upon the acting quartermaster-general, the chief of ordnance, to whom they will return such knapsack immediately upon the arrival of their regiment or companies at their regular stations.

7. Upon arrival in camp, commanding officers of regiments, battalions and detachments, and officers specially detailed, will at once report for instructions to the post commander, and regimental and battalion commanders will at the same time submit requisitions for the necessary quartermaster stores for the approval of the post commander.

8. Commanding officers of regiments and battalions will direct their respective senior medical officers to report, on arrival in camp, for orders and instructions to the surgeon-general. The senior medical officer in camp will perform the duties of post surgeon, and within ten days after his return from camp, will, on form 72, prepare and forward a report of his tour of service, through his regimental commander, to the surgeon-general.

The hospital steward of the regiment in camp, or if there be none, a suitable person selected by the surgeon-general, will act as post hospital steward, under the orders of the post surgeon, and the instructions of the surgeon-general. Such person, or hospital steward, must have passed an examination before the State Board of Pharmacy, and be licensed as a druggist, according to the laws of the State; and regimental and battalion hospital stewards not so examined and licensed, will not be recognized by the State, or permitted to act as hospital stewards. Regimental and battalion commanders ordered to camp duty, whose hospital stewards do not meet these requirements, will at once report the facts to these headquarters.

9. Regimental and battalion commanders, on arrival in camp, will direct their commissaries of subsistence to report for duty while in camp, to the acting commissary-general of subsistence, the chief of ordnance, without being, however, relieved from duty with their regiments or battalions.

A ration will consist of early bread and coffee, breakfast, dinner and supper. Ration returns will be prepared by the company commanders each day immediately after retreat or dress parade, covering

all the rations received by their respective commands during the day; as a basis for the return of the day will be taken the number of officers and men present at breakfast, allowing one day's rations for each; to this will be added the number of meals received by men joined subsequent to breakfast. Adjutants will perform the duties of a company commander for the field, staff, non-commissioned staff and band.

Company returns will be consolidated the same evening by regimental and battalion commanders, who will deliver the consolidation to the post commander; at the close of the tour these officers will deliver to the post commander a consolidated return, in duplicate, of all the rations received, which will be the voucher upon which the chief of ordnance will pay the contractors.

Commanding officers of troops coming from distant stations should see that their commands are properly provisioned for the journey.

Rations will be allowed for the authorized number of servants.

10. The pay-rolls, in triplicate, will be prepared *before* going into camp by entering on them the name of each officer and enlisted man of the organization, *with date of rank of officer and date of enlistment of the enlisted men*. In camp credit will be given for the day, after *retreat* of such day, excepting the last two days, and the rolls fully completed, signed and amounts carried out, will be handed to the paymaster-general as early before the close of the tour as possible, to enable him to pay the troops before their departure from camp. If practicable, the pay-rolls should be signed by the officers and enlisted men before coming in camp, but they must be signed on the first Sunday in camp.

Pay will be allowed to officers and enlisted men present for the days on which the regiment or company arrives at, and departs from, the camp; and for such other days of the tour during which they are present, at least from guard mounting in the morning until after retreat or dress parade in the evening, provided their whole stay in camp does not consist simply in coming to camp on Saturday and spending Sunday there, or staying but one day, and returning on Friday to depart again on Saturday. (See, also, sections 2 and 4 of paragraph II, General Orders No. 4, c. s.)

11. Commanding officers of regiments, battalions and companies are and will be held responsible for the correctness of returns and reports rendered by them.

There should be a well-instructed clerk to relieve the first sergeants of, or to assist them in, the clerical duty. In each company the first sergeant, or the clerk, should keep a list for each day on

which to place the name of every man arriving or leaving, and the hours of his arrival or departure during the day. This list will be found of great value to them in making the ration return, crediting the pay after retreat, and preparing the report book next morning.

The report book must show the condition of the company *at the time the report is made*, and the remarks are to explain all the alterations which may have occurred since making the last report.

Within ten days after the close of the camp tour, commanding officers of regiments and battalions will make reports to the Adjutant-General of the general management of their command and the results obtained.

12. The State service uniform will be worn as prescribed in the regulations; on drill, fatigue, and when not on actual duty, the fatigue coat, R. 835, may be worn. White helmets may be worn by regiments and battalions fully supplied with them.

13. The officers detailed as commanding officers of battalions are authorized, each, to select two competent officers of suitable rank, and five non-commissioned officers, to serve with them at the camp of instruction respectively as adjutant, quartermaster and commissary of subsistence, sergeant-major, quartermaster-sergeant, color-bearer, provost sergeant and clerk.

The names of officers and non-commissioned officers thus selected will, as soon as possible, be reported to the Adjutant-General.

14. The following books and blanks furnished by the State are required in camp:

By regimental and battalion commanders, forms 8, 12, 56, 69, 70.

By surgeons, forms 13, 71, 72.

By company commanders, forms 9, 56, 69.

And the attention of all officers is especially called to R. 134, 135, 170, 179, 180, 376, 387, 412, 473, 475, 477, 478, 479, 773.

15. Persons not connected with the administration of the post, or not being members of the organizations in camp, will not be permitted in the camp after tattoo.

16. *The sale of all spirituous liquors, wines, ale, or beer, and all huckster and auction sales within one mile of the camp are prohibited.*

No ale, beer, wines, or spirituous liquors shall be used in camp, except upon the prescription of the post surgeon.

Fireworks, illuminations and other out-of-place performances will not be permitted.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

ADJUTANT-GENERAL'S OFFICE,

GENERAL ORDERS, }
No. 9.

ALBANY, May 1, 1888. }

The following changes have occurred during the month of April, 1888, among the commissioned officers of the National Guard, State of New York :

COMMISSIONED.

Third Brigade.

Ithamar W. Copeland, Signal Officer, with the rank of Captain, with rank from March 26, 1888, original.

Eighth Regiment.

Edward A. Barker, First Lieutenant, with rank from January 5, 1888, vice Pentz, resigned.

Robert A. McKim, First Lieutenant, with rank from March 26, 1888, vice Lorigan, promoted.

Frederic E. Gibert, Second Lieutenant, with rank from March 6, 1888, vice Neftel, promoted.

Ninth Regiment.

Alvah H. Doty, Surgeon, with the rank of Major, with rank from March 8, 1888, vice Roof, resigned.

Godfrey A. S. Wieners, Second Lieutenant, with rank from March 22, 1888, vice Cook, promoted.

Thirteenth Regiment.

Richard P. Morle, Major, with rank from April 10, 1888, vice Ackerman, resigned.

J. Harry Sutterle, First Lieutenant, with rank from December 28, 1887, vice Cochran, promoted.

Fourteenth Regiment.

Edward A. Anderson, Second Lieutenant, with rank from March 21, 1888, vice Wallace; promoted.

Twenty-second Regiment.

Charles H. Rockwell, First Lieutenant, with rank from March 23, 1888, vice Lilliendahl, promoted.

Charles E. Crane, Second Lieutenant, with rank from March 23, 1888, vice Du Bois, promoted.

Thirty-second Regiment.

Maxwell C. Burger, Captain, with rank from March 1, 1888, vice Leonard, resigned.

Forty-seventh Regiment.

Frank Harrison, First Lieutenant, with rank from April 3, 1888, vice Davis, resigned.

Benjamin R. Meserole, Second Lieutenant, with rank from April 3, 1888, vice McCormack, resigned.

Sixty-fifth Regiment.

Lewis G. Northrup, First Lieutenant, with rank from March 6, 1888, vice Rawson, promoted.

Sixty-ninth Regiment.

James Moran, Lieutenant-Colonel, with rank from March 12, 1888, vice De Lacey, resigned.

Fourth Separate Company.

D. Griffin Smith, Second Lieutenant, with rank from March 16, 1888, vice McVicar, promoted.

Ninth Separate Company.

Lemuel W. Finch, First Lieutenant, with rank from March 15, 1888, vice Paterson, promoted.

Fourteenth Separate Company.

Robert F. Tompkins, First Lieutenant, with rank from March 15, 1888, vice Van Etten, promoted.

Twenty-first Separate Company.

James H. Lloyd, Captain, with rank from March 15, 1888, vice Foster, resigned.

Twenty-seventh Separate Company.

George W. Crooks, Captain, with rank from April 6, 1888, vice Barney, resigned.

Forty-fourth Separate Company.

Lewis E. Goodier, Captain, with rank from March 27, 1888, vice Everts, resigned.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
April 6	37th Sep. Co.....	George W. Marlette	Captain.
" 12	1st Brigade.....	Clarence H. Eagle.....	Major and I. R. P.
" 12	11th Regt	Francis Albrecht	Captain.
" 18	32d Regt	John H. M. Winne	First Lieutenant.
" 18	13th Regt	James Alexander.....	Second Lieutenant.
" 26	.....	William M. Ivins	Brig.-Gen. and J. A. Gen.

By order of the Commander-in-chief.

JOHN S. McEWAN,

Colonel and Assistant Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE,
ALBANY, *May 25, 1888.* }GENERAL ORDERS, }
No. 10. }

I. The Third Battery is detailed for a tour of service at the Camp of Instruction for one week, commencing July 21 and ending July 28, 1888.

II. The Nineteenth Separate Company is detailed for a tour of service at the Camp of Instruction, and as part of the First Provisional Battalion, for one week, commencing June 16 and ending June 23, 1888, in place of the Twenty-second Separate Company, which is relieved from such duty.

III. The Twelfth Separate Company is detailed for a tour of service at the Camp of Instruction, and as part of the Sixth Provisional Battalion, for one week, commencing August 4 and ending August 11, 1888, in place of the Ninth Separate Company, which is relieved from such duty.

IV. The tour of duty at the Camp of Instruction of the Thirty-sixth Separate Company is changed from July 28–August 4 in Fifth Battalion to June 23–30 in Second Battalion, and that of the Forty-third Separate Company from June 23–30 in Second Battalion to July 28–August 4 in Fifth Battalion.

V. The Fifteenth Separate Company is assigned to the Eighth instead of the Seventh Battalion, and the Twenty-seventh Separate Company to the Seventh instead of the Eighth Battalion.

VI. The following officers are assigned to duty at the Camp of Instruction:

As post commander, Major-General Josiah Porter, Adjutant-General.

As quartermaster, commissary of subsistence and ordnance officer, Brigadier-General Joshua M. Varian, Chief of Ordnance, assisted by such officer or officers as he may select as assistants.

As post adjutant, Colonel Frederick Phisterer, Acting Assistant Adjutant-General, S. N. Y.

As commanding officers of provisional battalions: Major Charles E. Waters, Twenty-third Regiment, of the First Battalion; Lieutenant-Colonel Alexis C. Smith, Twenty-third Regiment, of the Second Battalion; Major William A. Downs, Seventy-first Regiment, of the Third Battalion; Major Henry Chauncey, Jr., Eighth Regiment, of the Fourth Battalion; Lieutenant-Colonel S. C. Clobridge, Fourteenth Regiment, of the Fifth Battalion; Major J. J. Riker, Twelfth Regiment, of the Sixth Battalion; Captain W. Maurice Kirby, Second Separate

Company, of the Seventh Battalion; Lieutenant-Colonel Heman Dowd, Twelfth Regiment, of the Eighth Battalion.

As post surgeon from August 4 to 11, 1888, Major Lewis Balch, Surgeon Tenth Battalion.

As assistant surgeons of the post: First Lieutenant W. R. Campbell, Assistant Surgeon Forty-second Separate Company, for First Provisional Battalion; First Lieutenant Floyd B. Parke, Assistant Surgeon Twenty-sixth Separate Company, for Second Provisional Battalion; First Lieutenant A. Head, Assistant Surgeon Fortieth Separate Company, for Third Provisional Battalion; First Lieutenant George F. Whitney, Assistant Surgeon Fourth Separate Company, for Fourth Provisional Battalion; First Lieutenant James H. Glass, Assistant Surgeon Twenty-eighth Separate Company, for Fifth Provisional Battalion; First Lieutenant James H. Mitchell, Assistant Surgeon Seventh Separate Company, for Sixth Provisional Battalion; First Lieutenant Lourie Ashton, Assistant Surgeon Thirty-second Separate Company, for Seventh Provisional Battalion; First Lieutenant Charles W. Crispell, Assistant Surgeon Sixteenth Separate Company, for Eighth Provisional Battalion.

As acting post adjutants: First Lieutenant John S. Shepherd, Twenty-third Regiment, from June 16 to 23, 1888; First Lieutenant P. H. Williams, Adjutant Eleventh Regiment, from June 23 to 30, 1888; First Lieutenant Albert J. Myer, Sixty-fifth Regiment, from June 30 to July 7, 1888; First Lieutenant G. James Greene, Tenth Battalion, from July 7 to 14, 1888; First Lieutenant Russell Benedict, Adjutant Thirteenth Regiment, from July 14 to 21, 1888; the Adjutant of the Eighth Regiment from July 21 to 28, 1888; First Lieutenant John S. Shepherd, Twenty-third Regiment, from July 28 to August 11, 1888.

VII. The commanding officers of the separate companies will report at once by mail to the officers assigned to the command of the battalion of which they are to form part, furnishing at the same time the names and dates of rank of their officers and non-commissioned officers, and such other information as may be desired by those officers.

VIII. The attention of all concerned is called to paragraphs 5, 6 and 7, of section IV, G. O. No. 8, c. s., from these headquarters.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE.

GENERAL ORDERS, }
No. 11.ALBANY, *May 29, 1888.* }

I. The amendments to the Military Code passed by the Legislature of the State of New York, and contained in chapter 332 of the Laws of 1888, are hereby promulgated for the information and government of all concerned.

II. Sections 7, 10, 13, 27, 28, 35, 38, 39, 44, 47, 48, 51, 92, 94, 100, 102, 108, 114, 115, 116 and 139 have been amended so as to read as follows:

§ 7. The uniformed militia of the state shall constitute and be known as the national guard of the state of New York, and shall consist of the present uniformed force, and such persons as shall enlist or be appointed or commissioned therein; the present organizations, namely, the present brigades, regiments, battalions, troops, batteries and companies shall remain as now established, but the commander-in-chief shall have power to alter, divide, annex, consolidate, disband or reorganize the same, and create new organizations, whenever in his judgment the efficiency of the state forces will be thereby increased; and he shall, at any time, have power to change the organization of regiments, battalions, troops, batteries or companies, so as to conform more nearly to any organization that may hereafter be adopted for the United States army, and for that purpose the number of officers of any grade in regiments, battalions, troops, batteries or companies may be increased at the discretion of the commander-in-chief up to the number authorized for the United States army; provided that the aggregate force of the national guard in time of peace, fully armed, uniformed and equipped, shall be not less than ten and not over fifteen thousand enlisted men; but the commander-in-chief shall have power in case of war, insurrection, invasion or imminent danger thereof, to increase the force beyond the said fifteen thousand, and organize the same as the exigencies of the service may require.

§ 10. Each regiment of infantry shall consist of not less than eight nor more than twelve companies; one colonel, one lieutenant-colonel, one major, and a regimental staff to consist of one adjutant, one quartermaster, one commissary of subsistence, each with the rank of first lieutenant, one inspector of rifle practice with the rank of captain, one surgeon with the rank of major, one assistant surgeon with the rank of captain, one chaplain with the rank of captain, who shall be a regularly ordained minister of some religious denomination, one

sergeant-major, one quartermaster sergeant, one commissary sergeant, one ordnance sergeant, one hospital steward, one band leader or trumpeter, one drum major, and two color-bearers and two general guides, each with the rank of sergeant. In case of a regiment of twelve companies, the commander-in-chief may authorize two additional majors, but should the regiment be reduced to ten companies, by disbandment or otherwise, the commander-in-chief shall place on the list of supernumerary officers the two majors junior in rank.

§ 13. Whenever any organization shall be consolidated or disbanded the enlisted men thereof who may be discharged by reason of such consolidation or disbandment, and who shall thereafter reënter the service, shall have allowed to them, as part of their terms of service, the time already served.

§ 27. Except as otherwise provided in this act, field officers of regiments and battalions shall be chosen by the field and company officers of their respective regiments or battalions; but no person shall be eligible to the office of colonel who has not served at least three years either in the national guard or in the regular or volunteer forces of the United States, or collectively. Captains and lieutenants of troops, batteries and companies shall be chosen by the written or printed votes of the officers and enlisted men of the troops, batteries and companies respectively. Commanders of regiments and battalions shall appoint and warrant non-commissioned staff officers of their respective regiments and battalions, and they shall warrant the non-commissioned officers of the companies of their respective regiments and battalions from the members thereof, upon the written nomination of the company commanders respectively. In troops, batteries and companies not a part of a regiment or battalion, the non-commissioned officers shall be warranted by the brigade commanders from the members thereof, upon the written nomination of the troop, battery or company commanders. All non-commissioned staff officers, excepting hospital stewards, trumpeters, drum majors, band leaders and company veterinary sergeants, who may be civilians, must, before appointment, be duly enlisted men, belonging to some company of the organization.

§ 28. Upon receiving a written nomination pursuant to the preceding section, from a troop, battery or company commander, the officer authorized to issue the warrant thereon shall require the person nominated to be examined with respect to his qualifications and fitness to fill the office to which he has been nominated, by a board of examiners, consisting of from one to three commissioned officers, to be appointed by him, and if on the report of such board, he shall

adjudge the person nominated to be qualified for the office, he shall issue a warrant for him; otherwise new nominations shall be made.

§ 35. When a person elected shall have signified his acceptance, the record of proceedings of the election shall be forwarded by the officer who presided at the election to general headquarters, in such manner as the commander-in-chief may direct.

§ 38. The commander-in-chief may at his discretion, detail, or appoint and commission, the field and staff officers necessary to complete the organization of such provisional regiments and battalions as may be organized under section one hundred and forty-seven of this act, and he may in like manner fill the vacancies which may occur in such offices from time to time.

§ 39. If any person offering to vote at any election shall be challenged as unqualified, by any person entitled to vote thereat, the presiding officer shall declare to the person so challenged the qualifications of an elector, and if he shall state himself to be duly qualified and the challenge shall not be withdrawn, the presiding officer shall examine him under oath and determine as to his qualifications as such elector. A majority of the votes of all persons present and voting at an election shall be necessary to a choice.

§ 44. Commissioned officers rendered supernumerary by the consolidation, alteration or disbandment of any organization, or in any other lawful manner, shall be exempt from military duty, except in case of war, insurrection or invasion, provided they shall, in the month of November following the date of being rendered supernumerary, and in the month of November of each year thereafter, report themselves as such to the adjutant-general. The commander-in-chief may assign supernumerary officers who have so reported to the adjutant-general to active duty, and when on such active duty, they shall enjoy all the privileges, emoluments and immunities to which commissioned officers of the same grade in the national guard on active duty are entitled, provided, however, that they shall not be entitled to vote at elections at which elected officers of the same grade are entitled to vote. They shall take rank for the purposes of such assignment from the date thereof, and when elected or appointed to an office of the same grade in the national guard, they shall take rank from the date of such election or appointment.

§ 47. Any commissioned officer who has become or shall hereafter become disabled, or unfit and incapable of performing the duties of his office, and any commissioned officer who shall have served in the same grade for the continuous period of ten years, may be placed on the retired list and withdrawn from active service and command by

order of the commander-in-chief; but such order shall be subject to the provisions of the next succeeding section.

§ 48. In order to carry out the provisions of the last preceding section, the commander-in-chief shall appoint a board of not less than three nor more than five commissioned officers, one of whom shall be of the medical staff, whose duty it shall be to determine the facts as to the nature and occasion of the incapacity of such officers as appear disabled and unfit from any cause to perform military service, and whose cases shall be referred to it by the commander-in-chief. The said board is hereby invested with the powers of courts of inquiry and courts-martial, and, whenever it finds an officer incapacitated for active service, shall report such fact to the commander-in-chief, and if he approves such judgment, the disabled officer shall thereupon be placed upon the retired list, according to the provisions of this act; provided always, that the members of the board shall in every case be sworn to an honest and impartial performance of their duties according to the provisions relating thereto in section one hundred and five of this act, and that no officer shall be placed upon the retired list by the action of said board without having had a fair and full hearing before the board, if upon due notice he shall demand it. Provided, however, that it shall not be necessary to refer any case for the action of such board, arising under section forty-seven of this act, unless the officers designated by the commander-in-chief to be placed on the retired list, shall, within twenty days after being notified that they will be so retired, serve on the adjutant-general a notice in writing, that they demand a hearing and examination before such board; and provided further, that no officer, whose rank or promotion would be affected by the decision of such board in any case that may come before it, shall participate in the examination or decision of the board in such case.

§ 51. Every organization shall be provided, at the expense of the State, with such uniforms, arms, equipments, colors, musical instruments, books of instruction and of record, blanks, camp and garrison equipage and military supplies, as may be necessary for the proper performance of the duty required by this act. But in time of peace, no uniforms, arms, equipments or military supplies, shall be issued to or for the use of any organization unless the said organization shall have at least the minimum number of enlisted men prescribed by law.

§ 92. There shall be paid to such officers and enlisted men as shall be ordered for duty by the commander-in-chief in pursuance of the provisions of this act, the following sums each, for every day actually on duty: To all musicians and privates, one dollar and twenty-five cents; to all first sergeants and sergeant-majors, two dollars; to

all other non-commissioned officers, one dollar and fifty cents; to all commissioned officers of the line, below the rank of captain, two dollars and fifty cents; to all commanding officers of companies, three dollars; to all field officers below the rank of colonel, four dollars; to all commanding officers of regiments or battalions, five dollars; to all brigadier-generals, six dollars; to all major-generals, eight dollars; to all adjutants, three dollars; to all other staff officers, the same pay and allowances as are allowed to officers of equal grade in the line. All mounted officers and all members of any troop or battery, mounted and equipped, shall be paid two dollars per day for each horse actually used by them.

§ 94. All officers detailed to serve on any board or commission ordered by the commander-in-chief, or on any court of inquiry, court-martial or delinquency court ordered by proper authority, in pursuance of any provision of this act shall be paid a sum equal to one day's pay for field duty, for each day actually employed in said board or court, or engaged in the business thereof, or in traveling to and from the same. A meeting and adjournment only shall not be considered a day of actual duty. The sum in no case shall exceed ten days' pay and actual traveling expenses, unless upon application of the judge-advocate of a court-martial the commander-in-chief has authorized the court to sit for a longer period than ten days. To every marshal appointed to any such court shall be paid two dollars for every day not exceeding ten actually employed in the execution of the duties required of him, and twenty-five per centum of all fines and dues collected by him, and mileage or actual necessary traveling expenses while engaged in serving subpoenas or executing any process of the court; the same to be paid in like manner with other military accounts, but no marshal shall receive any fees from the person served; but when the session of the court exceeds ten days, he shall receive two dollars additional for every day of such actual extra session. Provided, however, that the pay, allowances and expenses of officers detailed on delinquency courts, for the trial of enlisted men, and of marshals appointed by such courts, shall be paid out of the military fund of the organizations for which such courts are ordered.

§ 100. The military courts of this state shall be:

1. Courts of inquiry.
2. General courts-martial.
3. Garrison courts-martial.
4. Delinquency courts, which are of two kinds:
 1. For officers.
 2. For enlisted men.

§ 102. General courts-martial shall be ordered by the commander-in-chief and shall consist of five officers, any three of whom shall constitute a quorum, but at all times a majority of the court must be of the grade at least equal to that of the accused. Garrison courts-martial for the trial of military offenses committed by enlisted men, when subject to the articles of war, may be appointed by the officer thereto authorized by such articles, and shall possess the jurisdiction and power to punish exercisable by such courts thereunder. Such courts shall consist of three officers, and the oaths of members, the organization of the court, its procedure, and the record of its proceedings shall be in the form prescribed for that of general courts-martial convened under this act.

§ 108. In courts of inquiry and general courts-martial, a judge-advocate shall attend. In delinquency courts and in garrison courts-martial, the services of a judge-advocate may be dispensed with, and in garrison courts-martial a member of the court may be designated to act as its recorder. In all the courts provided by this act, the accused shall have the right to appear and be heard by counsel.

§ 114. No person shall be brought to trial before a court-martial unless a copy of the order convening the court, and of the charges and specifications, shall be delivered to him or left at his usual place of abode, and if arrested, within twenty days after his arrest, nor unless the court shall have been ordered within thirty days after notice of the arrest has been received by the officer authorized to order the court; but the appearance of the accused without objection and pleading to the charges shall be deemed a waiver of any defect or irregularity of service of any of the papers mentioned in this section.

§ 115. The record of the proceedings and sentence of every court-martial shall, without delay, be delivered to the officer ordering the court, or to his successor in command, who shall approve or disapprove thereof within thirty days thereafter. The sentence of the court shall be published in orders as approved or modified.

§ 116. Every officer authorized to approve or disapprove of the proceedings and sentences of a court-martial is authorized to reconvene the court and send back its findings and sentence, or either of them, for revision. Such officer is also authorized to remit, commute or mitigate any punishment awarded by the court.

§ 139. The field, staff and company officers of any regiment or battalion, and the members of any troop, battery or company may organize themselves into an association, of which the commanding officer shall be president, and, by a vote of two-thirds of all their

members, form by-laws, rules and regulations, not inconsistent with this act, and which shall conform to the system prescribed in general regulations, and be submitted to the judge-advocate-general for his approval, and such by-laws, rules and regulations shall be binding upon all commissioned officers and enlisted men who are now or may hereafter be commissioned or enlisted therein; but they may be altered in the manner provided for their adoption, from time to time, as may be found necessary.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, {
No. 12.

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, June 1, 1888. }

The following changes have occurred during the month of May, 1888, among the commissioned officers of the National Guard, State of New York:

COMMISSIONED.

Judge-Advocate-General's Department.

Clifford A. H. Bartlett, Judge-Advocate-General, with the rank of Brigadier-General, with rank from May 12, 1888, vice Ivins, resigned.

Eighth Regiment.

Joseph L. Myers, First Lieutenant, with rank from April 25, 1888, vice Oates, promoted.

Samuel J. Sayle, Second Lieutenant, with rank from April 25, 1888, vice McCauley, resigned.

Ninth Regiment.

Mack Hertz, First Lieutenant, with rank from April 18, 1888, vice Billings, promoted.

Eleventh Regiment.

Charles Muecke, First Lieutenant, with rank from May 9, 1888, vice Mason, resigned.

James M. Rankin, Captain, with rank from April 6, 1888, vice Menzel, resigned.

Walter L. Miller, Captain, with rank from April 24, 1888, vice Albrecht, resigned.

Christopher L. Levien, First Lieutenant, with rank from May 7, 1888, vice Fleischer, resigned.

Twelfth Regiment.

William S. Gribble, Second Lieutenant, with rank from May 8, 1888, vice Schuman, promoted.

Thirteenth Regiment.

Russell Benedict, Adjutant, with the rank of First Lieutenant, with rank from January 26, 1888, vice Clark, resigned.

George C. Broome, First Lieutenant, with rank from April 30, 1888, vice Cochran, promoted.

Fourteenth Regiment.

Thomas D. Henry, Captain, with rank from April 30, 1888, vice Peacon, deceased.

Harry J. McDermott, Second Lieutenant, with rank from May 15, 1888, vice Fagan, promoted.

Twenty-second Regiment.

Walter S. Bennett, First Lieutenant, with rank from April 6, 1888, vice Byrd, resigned.

Edwin W. Dayton, First Lieutenant, with rank from April 9, 1888, vice Miller, resigned.

Samuel F. Ball, Second Lieutenant, with rank from May 7, 1888, vice Murphy, resigned.

Twenty-third Regiment.

David K. Case, First Lieutenant, with rank from May 14, 1888, vice Saunders, promoted.

Sixty-fifth Regiment.

William Edward Cutler, Second Lieutenant, with rank from February 20, 1888, vice Decker, resigned.

Frederick T. Lambrecht, Second Lieutenant, with rank from March 13, 1888, vice Nurzey, promoted.

Frank M. Chapin, Second Lieutenant, with rank from March 20, 1888, vice Northrup, promoted.

Sixty-ninth Regiment.

John Murphy, Adjutant, with the rank of First Lieutenant, with rank from April 16, 1888, vice Moran, promoted.

Seventy-fourth Regiment.

Henry L. Fish, Jr., First Lieutenant, with rank from April 11, 1888, vice Love, resigned.

Robert M. Harding, First Lieutenant, with rank from April 30, 1888, vice Bradish, resigned.

Tenth Separate Company.

Joseph M. Dickey, Captain, with rank from May 7, 1888, vice Smith, resigned.

Twenty-first Separate Company.

Merrill M. Dunspaugh, First Lieutenant, with rank from March 15, 1888, vice Buckley, discharged.

Thirty-third Separate Company.

Julius W. St. John, Second Lieutenant, with rank from April 6, 1888, vice Robinson, resigned.

Thirty-ninth Separate Company.

William R. Zimmerman, Captain, with rank from April 13, 1888, vice Miller, resigned.

James S. Boyer, First Lieutenant, with rank from April 13, 1888, vice Scott, resigned.

RESIGNED.

Date.	Organization.	NAMES.	Office.
1888,			
May 1	11th Regt	George Fleischer	First Lieutenant.
" 3	43d Sep. Co	Wilbur H. Carringer	Second Lieutenant.
" 10	23d Regt	William A. Underhill	First Lieutenant.
" 17	71st Regt	David H. Teets	First Lieutenant.
" 18	16th Sep. Co	Robert P. Forshew	Second Lieutenant.
" 28	40th Sep. Co	Theodore M. Barber	Captain.
" 29	35th Sep. Co	Lawrence M. Proctor	First Lieutenant.
" 29	9th Regt	W. Romeyn Vermilye	First Lt. and Com. of Sub.
" 29	14th Regt	Francis F. Thompson	First Lieutenant.
" 29	13th Regt	John T. Jennings	First Lieutenant.
" 29	.....	William W. Ladd, Jr	Lt.-Col. and As. J.-A.-Gen.

RENDERED SUPERNUMERARY.

First Lieutenant James O. Johnston, Adjutant Eighth Regiment.
(Special Orders No. 53, c. s.)

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE,

ALBANY, August 1, 1888. }

GENERAL ORDERS, {
No. 13. }

The following changes have occurred during the months of June, and July, 1888, among the commissioned officers of the National Guard, State of New York:

COMMISSIONED.

First Brigade.

David Crocker, Inspector of Rifle Practice, with the rank of Major, with rank from April 18, 1888, vice Eagle, resigned.

Second Brigade.

Edward Annan, Jr., Aide-de-Camp, with the rank of Captain, with rank from May 28, 1888, vice Brosé, promoted.

Eighth Regiment.

Oliver Harriman, Jr., Second Lieutenant, with rank from April 30, 1888, vice Monaghan, resigned.

Ninth Regiment.

Charles Newton Thompson, Assistant Surgeon, with the rank of Captain, with rank from April 27, 1888, vice Doty, promoted.

James H. Maconnell, First Lieutenant, with rank from May 4, 1888, vice Gale, resigned.

George A. Clement, Commissary of Subsistence, with the rank of First Lieutenant, with rank from June 5, 1888, vice Vermilye, resigned.

Tenth Battalion.

Anthime W. La Rose, First Lieutenant, with rank from May 30, 1888, vice Kiernan, resigned.

Eleventh Regiment.

Louis L. Coudert, First Lieutenant, with rank from June 4, 1888, vice Rankin, promoted.

Thirteenth Regiment.

Henry M. Tienken, First Lieutenant, with rank from May 2, 1888, vice Benedict, cashiered.

John A. Cochran, Surgeon, with the rank of Major, with rank from May 24, 1888, vice de la Vergne, retired.

Charles G. Tinker, Second Lieutenant, with rank from June 13, 1888, vice Broome, promoted.

Arthur B. Jarrett, Assistant Surgeon, with the rank of Captain, with rank from June 7, 1888, vice Cochran, promoted.

William J. Harding, Lieutenant-Colonel, with rank from February 8, 1886, vice Fackner, promoted.

Charles H. Luscomb, Captain, with rank from June 21, 1888, vice Morle, promoted.

John A. Anderson, Second Lieutenant, with rank from June 21, 1888, vice Copeland, resigned.

William H. Coughlin, First Lieutenant, with rank from June 18, 1888, vice Jennings, resigned.

George W. Rodgers, Second Lieutenant, with rank from July 13, 1888, vice Cochran, promoted.

Fourteenth Regiment.

Neil B. McBride, First Lieutenant, with rank from May 29, 1888, vice Redfern, resigned.

Twenty-second Regiment.

William J. Hussey, Second Lieutenant, with rank from April 6, 1888, vice Ryder, resigned.

Thirty-second Regiment.

Alexander Mitzel, Jr., First Lieutenant, with rank from May 11, 1888, vice Klein, promoted.

John Rooney, First Lieutenant, with rank from June 1, 1888, vice Schoeneck, promoted.

Forty-seventh Regiment.

George E. Libbey, First Lieutenant, with rank from May 28, 1888, vice Veritzan, promoted.

Sixty-fifth Regiment.

Arthur B. Christy, First Lieutenant, with rank from March 19, 1888, vice Decker, resigned.

Ernest W. Dobbins, Second Lieutenant, with rank from March 20, 1888, vice Carr, resigned.

Sixty-ninth Regiment.

William McLoughlin, First Lieutenant, with rank from June 6, 1888, vice Morgan, promoted.

John O'Connell, First Lieutenant, with rank from May 31, 1888, vice Murphy, promoted.

Thomas J. Loughlin, Assistant Surgeon, with the rank of Captain, with rank from July 9, 1888, vice Cosgrave, resigned.

Seventy-first Regiment.

John N. Golding, First Lieutenant, with rank from June 18, 1888, vice Brooks, resigned.

Frank Keck, Second Lieutenant, with rank from July 6, 1888, vice Golding, promoted.

Fifteenth Separate Company.

Francis B. Warring, First Lieutenant, with rank from June 6, 1888, vice Ulrich, resigned.

Sixteenth Separate Company.

Charles E. Nichols, Second Lieutenant, with rank from June 2, 1888, vice Forshaw, resigned.

Seventeenth Separate Company.

John J. Simmons, Second Lieutenant, with rank from June 12, 1888, vice Fitch, resigned.

Abbott C. Combes, Assistant Surgeon, with the rank of First Lieutenant, with rank from May 21, 1888, original.

Twenty-first Separate Company.

Michael Sullivan, Second Lieutenant, with rank from May 22, 1888, vice Dunsbaugh, promoted.

Twenty-fourth Separate Company.

Joseph O. Reed, Assistant Surgeon, with the rank of First Lieutenant, with rank from March 17, 1888, original.

Twenty-seventh Separate Company.

Sylvester E. Gregg, First Lieutenant, with rank from June 12, 1888, vice Crooks, promoted.

Thirty-fifth Separate Company.

Ernest S. Brown, First Lieutenant, with rank from June 5, 1888, vice Proctor, resigned.

Forty-first Separate Company.

John G. Butler, Captain, with rank from April 12, 1888, vice Randall, deceased.

Forty-fourth Separate Company.

James G. Hunt, Assistant Surgeon, with the rank of First Lieutenant, with rank from May 8, 1888, original.

Forty-fifth Separate Company.

Francis W. Higgins, Assistant Surgeon, with the rank of First Lieutenant, with rank from March 12, 1888, original.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
June 5	12th Regt	James H. Jones	Colonel.
" 5	Supernumerary,	DeWitt C. Amey	First Lieutenant.
" 5	9th Regt	James G. McMurray	Second Lieutenant.
" 5	71st Regt	William Brooke	First Lieutenant.
" 6	14th Regt	Alfred E. Steers	First Lieutenant.
" 7	69th Regt	A. William Ford	Major and Surgeon.
" 7	69th Regt	John J. Cosgrove	Captain and Ass't Surgeon
" 15	71st Regt	James E. Place	Captain.
" 15	11th Regt	William J. Burns	Second Lieutenant.
" 15	13th Regt	J. Harry Sutterle	First Lieutenant.
" 23	23d Regt	Fred C. Cocheu	Captain.
July 11	22d Regt	William H. Cortelyou	Captain.
" 11	23d Regt	Forbes Dunderdale	Second Lieutenant.
" 11	23d Regt	George R. Van Der Water	Captain and Chaplain.
" 18	12th Regt	James W. Gerard, Jr.	First Lieutenant.
" 26	9th Regt	William R. Clough	Captain.
" 26	11th Regt	Frederick Klonz	Captain.

RENDERED SUPERNUMERARY.

First Lieutenant Arthur F. Schermerhorn, Adjutant Twelfth Regiment. (Special Orders No. 57, c. s.)

By order of the Commander-in-Chief.

JOSIAH PORTER,

Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

ADJUTANT-GENERAL'S OFFICE,

ALBANY, N. Y., August 8, 1888. }

GENERAL ORDERS, }
No. 14. }

The date for the funeral of General P. H. Sheridan, United States Army, having been definitely fixed, the flags at all National Guard stations will be placed at half-staff until retreat on Saturday, the eleventh inst.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

ADJUTANT-GENERAL'S OFFICE,

ALBANY, August 15, 1888. }

GENERAL ORDERS, }
No. 15. }

I. The annual inspection and muster of the organizations named below will take place as follows :

Third Separate Company, Oneonta, Monday, September 10, 8 P. M.

Twenty-third Separate Company, Walton, Tuesday, September 11, 8 P. M.

Twenty-fourth Separate Company, Middletown, Wednesday, September 12, 8 P. M.

Thirtieth Separate Company, Elmira, Thursday, September 13, 8 P. M.

First Separate Company, Penn Yan, Friday, September 14, 2 P. M.

Twenty-sixth Separate Company, Elmira, Friday, September 14, 8.30 P. M.

Forty-fifth Separate Company, Cortland, Monday, September 17, 8 P. M.

Thirty-fifth Separate Company, Ogdensburg, Tuesday, September 18, 8 P. M.

Thirty-ninth Separate Company, Watertown, Wednesday, September 19, 8 P. M.

Second Separate Company, Auburn, Thursday, September 20, 8 P. M.

Twenty-fifth Separate Company, Canandaigua, Friday, September 21, 2 P. M.

Thirty-fourth Separate Company, Geneva, Friday, September 21, 8 P. M.

Eleventh Separate Company, Mt. Vernon, Monday, September 24, 3.30 P. M.

Fourth Separate Company, Yonkers, Tuesday, September 25, 3.30 P. M.

Forty-fourth Separate Company, Utica, Wednesday, September 26, 8 P. M.

Sixth Battery, Binghamton, Thursday, September 27, 8 P. M.

Twentieth Separate Company, Binghamton, Friday, September 28, 8 P. M.

II. Commanding officers will parade their respective commands in State service uniforms, heavy marching order ; fatigue cap and blouse to be packed in knapsack.

III. Attention is directed to official decisions on tactics, Par. 77 ; also to R. 593, sixth clause, and M. C. 67. Manual of inspection arms will be executed as prescribed in tactics.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, {
No. 16.

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, August 23, 1888. }

I. The annual inspection and muster of the organizations named below will take place as follows:

Tenth Battalion, Albany, Thursday, October 4, 8 P. M.

Seventeenth Separate Company, Flushing, Monday, October 8, 2.30 P. M.

First Battery, New York, Tuesday, October 9, 8 P. M.

Second Battery, New York, Wednesday, October 10, 8 P. M.

Third Battery, Brooklyn, Thursday, October 11, 8 P. M.

Eleventh Regiment, New York, Tuesday, October 16, 8 P. M.

Eighth Regiment, New York, Wednesday, October 17, 8 P. M.

Sixty-ninth Regiment, New York, Thursday, October 18, 8 P. M.

Thirty-second Regiment, Brooklyn, Tuesday, October 23, 8 P. M.

Fourteenth Regiment, Brooklyn, Wednesday, October 24, 8 P. M.

Thirteenth Regiment, Brooklyn, Thursday, October 25, 8 P. M.

Ninth Regiment, New York, Monday, October 29, 8 P. M.

Seventy-first Regiment, New York, Tuesday, October 30, 8 P. M.

Twelfth Regiment, New York, Tuesday, November 13, 8 P. M.

Twenty-second Regiment, New York, Wednesday, November 14,
8 P. M.

Seventh Regiment, New York, Thursday, November 15, 8 P. M.

Twenty-third Regiment, Brooklyn, Friday, November 16, 8 P. M.

Forty-seventh Regiment, Brooklyn, Monday, November 20, 8 P. M.

II. Commanding officers will parade their respective commands in State service uniforms, heavy marching order; fatigue cap and blouse to be packed in knapsack.

III. Attention is directed to official decisions on tactics, Par. 77; also to R. 592, fifth clause, and M. C. 67. Manual of inspection arms will be executed as prescribed in tactics.

IV. The Inspector-General will cause an officer of his department to inspect and muster the organizations named as above set forth.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

ADJUTANT-GENERAL'S OFFICE,

GENERAL ORDERS, }
No. 17.

ALBANY, August 28, 1888. }

I. Upon the recommendation of the Surgeon-General, persons appointed to medical offices will hereafter be examined, before being commissioned, by special boards selected by the Surgeon-General and hereby appointed :

For the First Brigade.

Major Robert V. McKim, Surgeon First Brigade.

Major Daniel M. Stimson, Surgeon Seventh Regiment.

Major Nelson H. Henry, Surgeon Twelfth Regiment.

For the Second Brigade.

Major George R. Fowler, Surgeon Second Regiment.

Major John F. Valentine, Surgeon Thirty-second Regiment.

Major William E. Spencer, Surgeon Twenty-third Regiment.

For the Third Brigade.

Major Herman Bendell, Surgeon Third Brigade.

Major Lewis Balch, Surgeon Tenth Battalion.

First Lieutenant Daniel S. Burr, Assistant Surgeon Twentieth Separate Company.

For the Fourth Brigade.

Major Roswell Park, Surgeon Fourth Brigade.

Major Charles G. Stockton, Surgeon Seventy-fourth Regiment.

Major Albert H. Briggs, Surgeon Sixty-fifth Regiment.

Returns of appointments of medical officers will be referred by the commanding officers of brigades to the boards appointed for their respective commands, and all concerned will be governed by the rules prescribed in General Orders No. 14, series 1887, from this office, so far as the same are applicable.

II. Appointees to medical offices shall be further examined in the standard branches taught in legally incorporated medical schools; the diagnosis and treatment of injuries and diseases to which troops may be exposed; the means employed for the urgent relief, and for the transportation, of sick and wounded, including stretcher drill (see provisional manual of instruction U. S. A.); camp and personal hygiene; and as to their knowledge of official papers relating to their department.

III. It appearing that there are hospital stewards who are not qualified according to the laws of the State, to perform the duties required of them, commanding officers are directed to discharge such from the service at once. Hospital stewards should have passed an examination before the State or county boards of pharmacy, and have received licenses as pharmacists.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, {	ADJUTANT-GENERAL'S OFFICE,	}
No. 18.	ALBANY, October 1, 1888.	

I. The following changes have occurred during the months of August and September, 1888, among the commissioned officers of the National Guard, State of New York :

COMMISSIONED.

Medical Department.

William F. Duncan, Assistant Surgeon-General, with the rank of Colonel, with rank from August 23, 1888, original.

Ninth Regiment.

John D. Walton, Captain, with rank from August 9, 1888, vice Swift, resigned.

Twenty-second^d Regiment.

George A. Miller, Lieutenant-Colonel, with rank from July 30, 1888, vice Harding, elected Lieutenant-Colonel Thirteenth regiment.

Twenty-third Regiment.

John S. Shepherd, Captain, with rank from August 20, 1888, vice Cocheu, resigned.

Thirty-second Regiment.

Wesley S. Maxson, First Lieutenant, with rank from September 7, 1888, vice Strining, promoted.

John A. Jochum, Second Lieutenant, with rank from August 10, 1888, vice Mitzgel, promoted.

Forty-seventh Regiment.

Francis J. Monaghan, Second Lieutenant, with rank from July 30, 1888, vice Libbey, promoted.

Sixty-fifth Regiment.

Harvey W. Putnam, Quartermaster, with the rank of First Lieutenant, with rank from June 30, 1888, vice Metzger, promoted.

Seventy-fourth Regiment.

Harrison C. Balcom, Captain, with rank from June 8, 1888, vice Bloomer, resigned.

George M. Rose, Second Lieutenant, with rank from June 20, 1888, vice Fish, promoted.

Twelfth Separate Company.

John Tallmadge, First Lieutenant, with rank from July 16, 1888, vice Burrage, discharged.

Forty-sixth Separate Company.

Darwin E. Vunk, Captain, with rank from September 3, 1888, original.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Aug. 1	14th Regt.....	Owen Lewis.....	First Lieutenant.
" 2	74th Regt.....	William F. Dent.....	Captain.
" 15	32d Regt.....	John C. McGlynn.....	Second Lieutenant.
Sept. 6	11th Regt.....	Philip H. Williams.....	First Lieut. and Adjutant.
" 6	23d Regt.....	Harold L. Crane.....	Captain.
" 12	10th Battalion.....	James H. Edwards.....	Second Lieutenant.
" 13	3d Brigade.....	Charles H. Stott, Jr.....	Major and Quartermaster.
" 18	71st Regt.....	Emile R. Bangs.....	Second Lieutenant.
" 19	9th Regt.....	Robert Warrell.....	First Lieutenant.
" 26	32d Regt.....	Emil Broggelwirth.....	Captain.

Assigned to Duty.

Major Robert Lenox Banks, Jr., supernumerary list to headquarters Third Brigade. (S. O. No. 100, c. s.)

Rendered Supernumerary.

Captain William F. Grotz, Thirty-second Regiment. (S. O. No. 100, c. s.)

II. The following company has been organized:

In the Third Brigade.

Forty-sixth Separate Company at Amsterdam. Special Orders No. 94, dated September 6, 1888. Mustered into service September 3, 1888.

By order of the Commander-in-Chief,

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

GENERAL ORDERS, }
NO. 19. }

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, October 15, 1888. }

Paragraph 936 of the Regulations is amended so as to read as follows:

936. *For general officers and officers of the general staff.*—Double-breasted ulster of dark blue cloth, with dark blue flannel lining; closing by means of four frog buttons of black mohair, and loops of black mohair cord down the breast, and at the throat by a long mohair loop, without tassel or plate, on the left side, and a black mohair frog button on the right; cord for the loops fifteen-hundredths of an inch in diameter; back slit up from bottom from twenty to twenty-five inches, according to the height of the wearer, and closing at will by buttons and button holes cut in a concealed flap; bottom of the skirt nine to twelve inches from the ground; a rolling collar of the same material as the coat, and broad enough to protect the ears when turned up, having a collar loop about four and one-half inches long and one and one-half inches wide; two horizontal side pockets on the outside, just below the hips; sleeves loose without cuff or slit; back straps to consist of two straps, each about eight inches long and two inches wide, let into the side seams of back of coat; left-hand strap to have a button-hole and the right-hand strap to have two buttons about two inches apart; a hood of the same material as the coat, lined with cloth or other suitable material,

made to button around the neck under the collar, and large enough to cover the head and cap, to be worn at night or inclement weather; a vertical slit five or six inches long over the left hip, large enough to admit the sword hilt; around each frog button on the breast a knot two and one-quarter inches in diameter of black mohair cord, seven-hundredths of an inch in diameter.

A cape of the same color and material as the coat, and reaching to the tips of the fingers when the arm is extended; a rolling collar of black velvet three inches broad, rounded to the edges and closing at the throat by a black mohair loop *à l'échelle* on the left side, without tassel or plate, and a black mohair frog button on the right, may be worn when not on duty with troops under arms.

For all other officers.—Double-breasted ulster of light blue cloth with lining to conform to the color of the arm of the service, except that for infantry, which will be dark blue; with cape made to detach from the coat and fall to the tips of the fingers when the arm and hand are extended; the back slit up from the bottom from twenty to twenty-five inches, according to the height of the wearer, and closing at will by buttons and button-holes cut in a concealed flap; a rolling collar of the same material as the coat, and broad enough, when turned up, to protect the ears, fastened together with a detachable collar loop by means of one small button at each end of collar; two horizontal side pockets on the outside just below the hips, one inside breast pocket, and one inside ticket pocket on left side; sleeves loose, without cuff or slit; a vertical slit five or six inches long over the left hip; one row of seven buttons on each breast; seven small buttons on the cape.

The coat and cloth to be according to patterns in the office of the Adjutant-General and the office of the Chief of Ordnance.

To indicate rank.—There will be on both sleeves a knot of black Russian braid, not exceeding one-quarter inch in width.

For a general officer, of five braids, double knot.

For a colonel, of five braids, single knot.

For a lieutenant-colonel, of four braids, single knot.

For a major, of three braids, single knot.

For a captain, of two braids, single knot.

For a first lieutenant, of one braid, single knot.

Second lieutenant and chaplain, without braid.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, }
No. 20.ADJUTANT-GENERAL'S OFFICE, }
ALBANY, November 1, 1888. }

I. The following changes have occurred during the month of October, 1888, among the commissioned officers of the National Guard, State of New York:

COMMISSIONED.

Seventh Regiment.

Addison McDougall, Second Lieutenant, with rank from September 19, 1888, vice Young, deceased.

Eighth Regiment.

George L. Wentworth, Adjutant, with the rank of First Lieutenant, with rank from September 29, 1888, vice Johnston, rendered supernumerary.

Ninth Regiment.

Frank A. Gale, Captain, with rank from September 14, 1888, vice Clough, resigned.

Henry Cleveland, First Lieutenant, with rank from July 23, 1888, vice Coit, resigned.

Fourteenth Regiment.

Patrick F. McLaughlin, Second Lieutenant, with rank from July 16, 1888, vice Lloyd, transferred to Company C.

Twenty-third Regiment.

Eliphalet Hendrickson, First Lieutenant, with rank from September 11, 1888, vice Underhill, resigned.

Edward J. Kraft, First Lieutenant, with rank from October 1, 1888, vice Shepherd, promoted.

William T. Colyer, Second Lieutenant, with rank from September 11, 1888, vice Dunderdale, resigned.

Frederick A. Croker, Second Lieutenant, with rank from October 18, 1888, vice Case, promoted.

Thirty-second Regiment.

George D. Russell, Captain, with rank from October 12, 1888, vice Broggelwirth, resigned.

Emil Magnus, Jr., Second Lieutenant, with rank from September 21, 1888, vice Derlich, resigned.

Seventy-first Regiment.

Peter H. Halley, First Lieutenant, with rank from July 5, 1888, vice Teets, resigned.

Seventy-fourth Regiment.

Robert M. Harding, Captain, with rank from September 3, 1888, vice Dent, resigned.

Forty-sixth Separate Company.

Samuel Wasserman, Second Lieutenant, with rank from September 3, 1888, original.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Oct. 3	22d Regt	George F. Potter.....	Captain.
" 9	7th Regt	Wilbur B. Bradley.....	Second Lieutenant.
" 16	.....	Frederick C. McLewee	Lieut.-Col. & As. In. Gen.
" 26	65th Regt	Thomas J. Quinlivan.....	Second Lieutenant.
" 27	6th Sep. Co	James L. Thompson	First Lieutenant.
" 27	47th Regt	Charles A. Denike	Captain.
" 31	4th Sep. Co.....	George F. Whitney.....	First Lt. and Asst. Surg.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, }
No. 21.

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, November 21, 1888. }

The Commander-in-Chief announces with profound sorrow the death of Colonel William H. Brownell, Assistant Chief of Ordnance of the State, who departed this life at Brooklyn on the fourteenth instant.

Colonel Brownell entered the service as a private in Company E, Forty-seventh Regiment, October 12, 1869; was promoted Corporal November 20, 1871; Sergeant, July 24, 1872; Second Lieutenant, May 13, 1873; First Lieutenant, January 20, 1874; Captain, October 10, 1874; Major, December 23, 1874; Lieutenant-Colonel, December 29, 1875; Colonel, September 5, 1877; Brigadier-General, September 5, 1881; resigned, January 7, 1886, and was appointed Colonel and Assistant Chief of Ordnance the same day.

The officers of the National Guard will wear the customary badge of mourning for thirty days.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS,
No. 22. }ADJUTANT-GENERAL'S OFFICE,
ALBANY, December 1, 1888. }

The following changes have occurred during the month of November, 1888, among the commissioned officers of the National Guard, State of New York:

COMMISSIONED.

Fourth Brigade.

Charles Clifton, Assistant Adjutant-General, with the rank of Lieutenant-Colonel, with rank from April 22, 1884, vice self, rendered supernumerary.

Seventh Regiment.

Austin E. Allen, Captain, with rank from November 20, 1888, vice Cooper, resigned.

Charles E. Lydecker, Captain, with rank from November 21, 1888, vice Mills, resigned.

Daniel A. Nesbitt, Captain, with rank from November 22, 1888, vice Steele, rendered supernumerary.

Harry E. Zittel, Second Lieutenant, with rank from October 16, 1888, vice Bradley, resigned.

Eighth Regiment.

Henry G. Ridabock, Quartermaster, with the rank of First Lieutenant, with rank from October 17, 1888, vice Wentworth, appointed Adjutant.

Ninth Regiment.

Godfrey A. S. Wieners, First Lieutenant, with rank from October 4, 1888, vice Cook, resigned.

Herbert C. Taylor, First Lieutenant, with rank from October 23, 1888, vice Rice, resigned.

Twelfth Regiment.

Augustus Baus, First Lieutenant, with rank from October 3, 1888, vice Butt, resigned.

Henry Gallup Paine, First Lieutenant, with rank from October 26, 1888, vice Roosevelt, promoted.

Thirteenth Regiment.

William W. Hanold, First Lieutenant, with rank from September 17, 1888, vice Tomes, resigned.

Twenty-second Regiment.

William V. King, Major, with rank from November 19, 1888, vice Miller, promoted.

Seventy-fourth Regiment.

Samuel B. Newton, First Lieutenant, with rank from October 12, 1888, vice Balcom, promoted.

RESIGNED.

Date.	Organization.	NAME.	Office.
1888.			
Nov. 15		Charles A. DeLaney.....	Lieut.-Col., supernumer'y.
" 15	22d Regt.....	Clarence M. Skellen.....	First Lieutenant.
" 16	7th Regt.....	Harry D. Cooper.....	Captain.
" 16	7th Regt.....	Andrew Mills.....	Captain.
" 26	6th Sep. Co.....	George D. Smith.....	Second Lieutenant.
" 26	71st Regt.....	Edward J. Little.....	Second Lieutenant.
" 26	7th Regt.....	John A. Thackaberry.....	First Lieutenant.
" 26	7th Regt.....	Frank Pawling.....	First Lieutenant.
" 30	7th Regt.....	J. Egm. Schermerhorn.....	First Lieutenant.
" 30	71st Regt.....	William W. Chilton.....	First Lieutenant.

RENDERED SUPERNUMERARY.

Captain Henry S. Steele, Seventh Regiment. (Special Orders No. 117 c. s.)

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

ADJUTANT-GENERAL'S OFFICE,

ALBANY, December 2, 1888. }

GENERAL ORDERS, {
No. 23.

Paragraph 818 of the Regulations is hereby amended so as to read as follows:

818. Armories and arsenals shall be used only by troops of the National Guard (except that they may be used by posts of the Grand Army of the Republic, or other veteran organizations of honorably discharged Union soldiers or sailors of the late war, in cases where such use is authorized by statute), and for such other purely military purposes as may be approved by the Adjutant-General.

By order of the Commander-in-Chief.

JOSIAH PORTER,

Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, }
No. 24.ADJUTANT-GENERAL'S OFFICE, }
ALBANY, *December 11, 1888.* }

I. The design submitted by the Surgeon-General for a badge distinctive of the Ambulance Corps of this State, to be awarded as an indication of special fitness to aid the sick and injured under urgent circumstances, viz.: A medal of solid sterling silver one and one-quarter inches in diameter, bearing a Greek cross in red enamel, with the legend "Prompt aid to the injured, N. G. S. N. Y.," the pin by which the medal is to be fastened to the coat to be of gold; each medal to have stamped on its inverse side its distinctive number, is hereby approved.

II. The Surgeon-General will award the medals in accordance with Par. VIII of General Orders No. 36, series of 1887.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK:

GENERAL ORDERS, }
No. 25.ADJUTANT-GENERAL'S OFFICE, }
ALBANY, *December 13, 1888.* }

I. Captain Harry A. Ely, Ninth Regiment, was tried before a general court-martial, convened by S. O. No. 8, from these headquarters, dated January 30, 1888, upon the following charge and specification:

CHARGE:

CONDUCT UNBECOMING AN OFFICER AND A GENTLEMAN.

• *Specification.*

In this, that the said Harry A. Ely, while holding commission in the National Guard of the State of New York, as Captain of the Ninth Regiment of Infantry, and on or about the 24th day of August, 1887, at the city of New York, did state and represent to one Lawrence P. Mingey that he was in need of money and would, in consideration of the payment to him by the said Lawrence P. Mingey of the sum of twenty dollars, assign to the said Mingey a check for thirty dollars, which he stated and represented would be paid him in a few days thereafter, for his uniform allowance, by the Adjutant-General; and did further state and represent that he was entitled to the said check and the proceeds thereof; that, relying upon the said representations,

the said Mingey paid the said Ely the sum of twenty dollars and received from him a paper whereof the following is a copy:

NEW YORK, *August 24, 1887.*

For value received I hereby assign, transfer and release to L. P. Mingey my check from the State for thirty dollars (\$30), due on uniform account, the same to be indorsed and promptly forwarded to the said L. P. Mingey, immediately upon its receipt by me.

HARRY A. ELY.

Signed and sealed in }
 presence of }
 [SEAL.] JOHN LAMB.

That prior to the said statements, representation^s and transaction, and on or about the 24th day of June, 1887, at the city of New York, the said Ely had already, upon the credit of his uniform allowance, obtained from Major Clifford A. H. Bartlett the sum of thirty dollars, and delivered to him a paper whereof the following is a copy:

June 24, 1887.

Received from C. A. H. Bartlett, thirty dollars, to be returned by State uniform check when received.
 \$30.

H. A. ELY.

That after obtaining the said two several sums of money the said Harry A. Ely received from the Adjutant-General a check for thirty dollars for his uniform allowance, indorsed the same, and appropriated the proceeds of the same to his own use.

(Signed,) GEORGE A. MILLER,
Major Twenty-second Regiment, N. G. S. N. Y.

Dated NEW YORK CITY, *November 10, 1887.*

The court found Captain Ely guilty of both the charge and specification, and sentenced him to be cashiered.

II. The court-martial before which this case was tried is hereby dissolved, and the sentence of cashiering is approved and will be carried into effect.

By order of the Commander-in Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

CIRCULARS.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

CIRCULAR, }
NO. 1. }

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, *May 16, 1888.* }

For the information of the Secretary of War, commanding officers will forward to this office, *direct*, not later than June 2, 1888, a statement showing the strength of their respective commands on May thirty-first inst. Commissioned officers will be specified by the office held and the number of non-commissioned officers, musicians and privates separately stated.

Brigade commanders will report their staff only.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

GENERAL HEADQUARTERS, STATE OF NEW YORK :

CIRCULAR, }
NO. 2. }

ADJUTANT-GENERAL'S OFFICE, }
ALBANY, *September 8, 1888.* }

Requisitions for the new fatigue coats and the new overcoats, to be furnished by the State, may now be forwarded to this office.

Issues will be ordered as rapidly as the coats are received from the manufacturers and inspected.

By order of the Commander-in-Chief.

JOSIAH PORTER,
Major-General and Adjutant-General.

(D.)

REPORT OF THE INSPECTOR-GENERAL, 1888.

STATE OF NEW YORK :

INSPECTOR-GENERAL'S DEPARTMENT,
ALBANY, *December 20, 1888.* }

The Adjutant-General, S. N. Y., Albany.

SIR.—Complying with the provisions of M. C. 20 and R. 589, I have the honor to transmit my report for the current year.

Accompanying this I beg to submit reports of inspection and muster of the several organizations of the National Guard made by the Assistant Inspector-General, pursuant to General Orders Nos. 6, 15 and 16, General Headquarters, S. N. Y., and dated respectively April 6, August 16 and 28, 1888.

The result of the muster shows the aggregate strength of the National Guard at that time to be 13,454, subdivided as follows :

General headquarters	33
Brigadier-generals and staffs.....	51
Infantry	12,885
Artillery	440
Signal corps.....	45
	<hr/>
	13,454

Aggregate strength at muster of 1887 was

12,496

The composition of the several brigades is as follows :

FIRST BRIGADE.

Eight regiments infantry.....	5,437
One light battery	111
One Gatling battery	107
One signal corps.....	24
	<hr/>
	5,679

SECOND BRIGADE.

Five regiments infantry.....	2,963
One separate company infantry.....	61
One Gatling battery	80
One signal corps.....	21
	<hr/>
	3,125
	<hr/>

THIRD BRIGADE.

One battalion infantry.....	260
Thirty separate companies infantry.....	2,263
One light battery	70
	<hr/>
	2,593
	<hr/>

FOURTH BRIGADE.

Two regiments infantry	857
Fourteen separate companies infantry	1,044
One light battery	72
	<hr/>
	1,973
	<hr/>

The reports received regarding the general condition of the troops still continues to be gratifying.

The improvement, although not as marked as that of 1887 over 1886, has been positive, and in many organizations has reached a condition that closely approaches perfection.

While the general efficiency and discipline is steadily improving, it has not yet attained that degree of excellence which is easily possible and sincerely to be hoped for.

There is not yet that proficiency in military courtesy in the National Guard which we have a right to expect when the high degree of intelligence of the men of which the Guard is composed is considered.

It does not seem to be realized that there is a distinct line between the military and the social. It is a common sight to observe enlisted men in armories and on public parades pass or approach and address commissioned officers without salute. What is also unpleasant to note is the *undue* familiarity in manner and conversation between officers and men while in uniform.

This evil can be largely remedied in the future by making it part of the course of instruction given to the recruit. This should be as strongly impressed upon his mind, and as rigidly exacted from him as any other part of his proper instruction.

Lieutenant Totten, U. S. A., in his report on the encampment of the Connecticut National Guard, says on the subject of salutes: "Not only should officers expect and require it, but they should take pains to place its *rationale* before the men in a reasonable and suggestive manner. Let it be understood as a symbol of comradeship. * * * Often drilled at in the armories and more often spoken of.

"It is by example, by precept and by line on line, that these matters may be best brought about, and this so quietly that before one realizes it the victory is won."

It is hoped that commanding officers will give this matter personal attention and by so doing remedy the evil.

INSPECTION OF COMPANIES OF REGIMENTS.

The inspection of companies of regiments noted in my last report as having been inaugurated, was continued during the season of 1888 as far as the time of the inspecting officers would admit.

The companies of the Eighth, Ninth, Eleventh, Twelfth, Sixty-ninth and Seventy-first regiments have in this way all been visited. It is gratifying to be able to report that these inspections were hailed with gratification not only by the company officers but by the commanding officers of regiments, and the benefits derived are generally admitted to have been vast, and in almost every case a repetition has been requested.

The recommendation made in my two preceding reports as to the advisability of sending competent officers to visit *all* separate companies with a view to assisting them in their work still applies. These organizations, with few exceptions, are made up of a superior class of men, who are anxious to become proficient, and excel.

They often fall into errors, both of commands of officers and execution of movements, and only require to be told of their deficiencies, when they are promptly corrected.

SIGNAL CORPS.

The question as to what should be the proper organization of a signal corps, seems to be solved.

The two now existing and attached to the First and Second brigades have developed such a degree of proficiency that they may be considered a valuable addition to the National Guard.

At the inspection of these two corps, Lieutenant W. R. Hamilton, U. S. A., was by invitation present.

This officer expressed himself as in the highest degree gratified with the exhibition of the respective drills.

The corps of the Second brigade is specially to be mentioned, and Lieutenant Hamilton in a communication to this department expresses himself as follows:

“The signal corps of the Second brigade seemed to me to be unusually conversant with the signal alphabet, and the manner and execution of both sending and receiving day signals with the flag. The knowledge seemed not to be confined to two or three men but all alike in the corps proved that they were able to do good work in this department. The rate of sending test messages was unusually rapid; a message of twenty-six (26) letters put down in such a way as to spell no word was transmitted and received *correctly* in one minute and twenty-six seconds.”

In speaking of the First Brigade Corps, Lieutenant Hamilton says: “The members were fairly proficient in signal exercise with the flags, while four men seemed unusually well up. A message of forty letters was sent and received in one minute and twenty-one seconds, it being a plain, ordinary message.”

It should be said of this corps that it has not been organized as long nor drilled as often as that of the Second Brigade.

The value of these organizations in any case where their services would be required can not be too highly estimated.

ARTILLERY.

In so far as it is possible for this arm of the service to attain proficiency under our present system, the State has the right to be justly proud of the five existing organizations. The First, Fifth and Sixth light batteries and the Second and Third Gatlings are all in most excellent condition. They are composed of men who take great pride in their organizations—well disciplined, well drilled and unquestionably reliable.

ARMS, UNIFORMS AND EQUIPMENTS.

The arms throughout the State are in very good condition considering the long time (twenty years) that they have been in service. With few exceptions they are well cared for by the different organizations, and while many rifles may be unfit for fine shooting, all may be pronounced serviceable.

Belts, boxes and scabbards having been issued new during the past two years, are in excellent condition. Haversacks generally in good order.

Canteens as a rule unfit for use; many are battered and leaky and others rusty and foul in the interior, these defects existing to such an extent that at least seventy-five per cent of the force should be supplied with new ones.

Knapsacks are in fair condition generally, and while it may soon be necessary to purchase some new ones to provide for recruiting and to supply the place of those rendered unserviceable, I do not consider, notwithstanding objection has been made to the style now in use, that the necessity for a change is advisable at present. They are seldom used and answer all present purposes.

Uniforms are as a rule in good, serviceable condition, and well cared for by all organizations.

The new blue overcoat now being issued will complete a substantial and serviceable outfit for the guard.

BOOKS AND BLANKS.

As reported last year the keeping of books and records is decidedly not uniform. In this I speak particularly of company organizations. I am firmly of opinion that certain books now issued should be withdrawn, and no further issue made, viz.: The company letter, order and journal, and indorsement books.

These three books are seldom used, and when they are the entries, particularly in the indorsement book, are generally wrong.

A company commander writes, or should write, but few letters, and these can be readily preserved by a press copy; as all orders are, as a rule, printed, a perfectly preserved file is all that is required, and it must be apparent that a journal and indorsement book is of no use to a company, the documents received being rarely of a nature which require indorsement in return, or

any other reply than a communication of which a copy can be retained and the letter received *filed*.

I would therefore recommend that these useless books be not issued in the future, and that company commanders be relieved from the necessity of using them.

This done will enable inspecting officers to lay greater stress on the importance of properly keeping the "descriptive and attendance books."

Book-keeping and paper work should be reduced to a system of absolute necessities, and anything that tends to ornament should be eliminated.

INSPECTIONS.

Experience of the last three years has fully demonstrated that *all* the organizations should be inspected and mustered in the spring.

In view of this conclusion I would respectfully recommend that the inspection and muster of organizations of the First and Second brigades be ordered to take place commencing not later than March first and to be immediately followed by the Third and Fourth brigades.

I would further recommend that all regiments or battalions not ordered to a tour of duty at camp, be required to devote one day for field exercises, and that the code be so amended as to make this day's duty obliged to be counted as one of the five compulsory parades upon which the State allowance is granted, and that the necessary transportation be provided by the State, to some ground suitable for field maneuvers, and that the troops be paid for the day's duty.

Commanding officers to make report of the day's work to the Adjutant-General within five days after its performance.

PHYSICAL QUALIFICATIONS.

In many of the best organizations of the National Guard a system for examination of recruits as to physical qualifications is now in vogue.

It is not uncommon during the season of inspection to be requested by commanding officers of organizations to excuse men as unable to endure "*the strain*" required for the ceremonies, or that another be allowed to be presented without equipments, because the wearing of the knapsack, or belt, etc., is unbearable by reason of some infirmity. These men should never have been enlisted.

In order that this evil may be as far as possible averted, I would respectfully recommend that a regulation be adopted which will provide for such a general and uniform system for examination of all applicants for admission to the National Guard as may be recommended by the Surgeon-General, and that no enlistment shall be deemed perfect unless accompanied by the certificate of the medical officer of the organization, or in case there is none, of some reputable surgeon in the locality who shall be authorized to make the required examination.

CHANGES IN ORGANIZATION.

Since my last report there have been organized and added to the force two separate companies of infantry, to wit:

The Forty-fifth Separate Company, Cortland.

The Forty-sixth Separate Company, Amsterdam.

Both these organizations bid fair to become valuable acquisitions to the National Guard.

The Twenty-fifth Separate Company, Canandaigua, has been disbanded on request of the commanding officer, he seeing no hope of recruiting the company to a proper standard.

I have the honor to be, General,

Very respectfully.

EMIL SCHAFER,
Inspector-General.

STATE OF NEW YORK:

INSPECTOR-GENERAL'S OFFICE, }
ALBANY, December 20, 1888. }

The Inspector-General, S. N. Y., New York city:

SIR.—I have the honor respectfully to report that in compliance with General Orders Nos. 6, 15 and 16, General Headquarters, S. N. Y., dated respectively April 6, August 16 and 28, 1888, that I have inspected and mustered the several organizations of the National Guard named therein and submit the following as my report:

SEVENTH REGIMENT, *New York City.*

What seemed to be the zenith of possibility at the inspection of 1887 has been excelled. The Seventh Regiment, complete in its organization, perfect in discipline and military courtesy, admi-

rable in appearance, still maintains a well-earned reputation of being the finest body of citizen soldiers in this or any other country.

	PRESENT.			ABSENT.			Aggregate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	10	.....	10	.....	.....	.....	10
Non-commissioned staff...	.....	10	10	.....	1	1	11
Company A.....	3	100	103	.....	.....	.....	103
Company B.....	3	99	102	.....	1	1	103
Company C.....	3	96	99	.....	4	4	103
Company D.....	3	99	102	.....	1	1	103
Company E.....	3	100	103	.....	.....	.....	103
Company F.....	3	100	103	.....	.....	.....	103
Company G.....	3	99	102	.....	1	1	103
Company H.....	3	97	100	.....	3	3	103
Company I.....	3	100	103	.....	.....	.....	103
Company K.....	3	93	96	.....	7	7	103
Total.....	40	993	1,033	.....	18	18	1,051

Percentage present, 93.28.

EIGHTH REGIMENT, *New York City.*

The improvement noted at last inspection has continued during the past year in an evidently proper and healthy manner, this is demonstrated by the fact that although only a gain of two (2) in the aggregate is noted, the number present is increased thirty-five. This, added to the improved appearance of the regiment, is very satisfactory.

	PRESENT.			ABSENT.			Aggregate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	9	.....	9	.....	.....	.....	9
Non-commissioned staff...	.....	9	9	.....	1	1	10
Company B.....	3	36	39	.....	4	4	43
Company C.....	3	32	35	.....	7	7	42
Company D.....	1	39	40	1	18	19	59
Company E.....	3	44	47	.....	10	10	57
Company F.....	2	29	32	.....	20	20	52
Company G.....	3	42	45	.....	12	12	57
Company H.....	2	37	39	.....	9	9	48
Company I.....	3	43	46	.....	8	8	54
Total.....	30	311	341	1	89	90	431

Percentage present, 79.11.

NINTH REGIMENT, *New York City,*

Shows a gain in aggregate of seventy-three (73). While the appearance of the regiment as regards cleanliness may be said to show an improvement as compared with last inspection, in other

respects its condition remains as at last report. The large number of absentees, one hundred and sixty-six (166), from an evening inspection is strong evidence of a demoralized condition, or the fact that the organization is largely made up on paper.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	9	.....	9	.....	.....	.....	9
Non-commissioned staff .....	.....	10	10	.....	1	1	11
Company A	2	94	96	.....	6	6	102
Company B	2	46	48	1	31	32	80
Company C .....	.....	29	29	1	17	18	47
Company D	2	30	32	.....	20	20	52
Company E	2	35	37	.....	20	20	57
Company F	2	44	46	.....	4	4	50
Company G	1	46	47	.....	8	8	55
Company H	2	42	44	1	13	14	58
Company I	2	31	33	.....	18	18	51
Company K	1	36	37	1	24	25	62
Total	25	443	468	4	162	166	634

Percentage present, 73.81.

TENTH BATTALION, *Albany.*

This organization having no armory, and consequently no opportunity to drill, and not having been to camp during the past year, no comment can be made except such as applies to the individual companies.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	4	.....	4	2	.....	2	6
Non-commissioned staff .....	.....	4	4	.....	3	3	7
Company A	3	55	58	.....	9	9	67
Company B	3	44	47	.....	12	12	59
Company C	1	45	46	1	20	21	67
Company D	2	39	41	.....	13	13	54
Total	13	187	200	3	57	60	260

Percentage present, 76.92.

ELEVENTH REGIMENT, *New York City.*

The condition of this organization is decidedly unhealthy. The material is largely poor, made up of men who have no pride either in themselves or the organization. It is not, either as regards discipline and efficiency, in any way reliable.

There is, in my opinion, only one proper course to pursue in the premises, *i. e.*, the disbandment of the organization.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	7	.....	7	.....	.....	.....	7
Non-commissioned staff .....	.....	8	8	.....	1	1	9
Company A.....	2	43	45	.....	42	42	87
Company B.....	3	41	44	.....	31	31	75
Company C.....	3	44	47	.....	23	23	70
Company D.....	1	52	53	.....	16	16	69
Company F.....	2	33	35	.....	9	9	44
Company G.....	2	25	27	.....	22	22	49
Company H.....	2	26	28	.....	21	21	49
Company I.....	1	33	34	1	30	31	65
Company K.....	1	41	42	.....	11	11	53
Total.....	24	346	370	1	206	207	577

Percentage present, 64.12.

TWELFTH REGIMENT, *New York City.*

The regiment shows a positive improvement in general appearance, and in this regard the inspection may be said to have surpassed any during the past three years. The entire condition of the regiment gives such evidence of thrift as to promise a prosperous future.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	9	.....	9	.....	.....	.....	9
Non-commissioned staff.....	.....	11	11	.....	.....	.....	11
Company A.....	3	45	48	.....	15	15	63
Company B.....	2	39	41	.....	5	5	46
Company C.....	3	52	55	.....	8	8	63
Company D.....	2	74	76	.....	14	14	90
Company E.....	2	38	40	.....	10	10	50
Company F.....	2	53	55	.....	6	6	61
Company G.....	2	65	67	1	8	9	76
Company H.....	3	61	64	.....	15	15	79
Company I.....	2	36	38	1	9	10	48
Company K.....	2	34	36	.....	6	6	42
Total.....	32	508	540	2	96	98	638

Percentage present, 84.63.

THIRTEENTH REGIMENT, *Brooklyn.*

In general appearance and discipline this inspection of the Thirteenth was the best of any during the past six years. The proper and careful adjustment of equipments and steadiness of

the men during the entire ceremony, gave evidence of thrift and discipline which is admirable. Company F was the poorest presented company in the regiment; it has gained nothing in membership, is below the minimum, and evidently needs immediate and thorough looking after. Otherwise the regiment is to be congratulated.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	9	.....	9	1	.....	1	10
Non-commissioned staff....	.....	11	11	.....	.....	....	11
Company A.....	2	54	56	1	5	6	62
Company B.....	2	50	52	.....	4	4	56
Company C.....	2	56	58	.....	7	7	65
Company D.....	2	45	47	.....	3	3	50
Company E.....	3	81	84	.....	16	16	100
Company F.....	1	34	35	1	12	13	48
Company G.....	1	92	93	.....	4	4	97
Company H.....	2	69	71	.....	3	3	74
Company I.....	3	43	46	.....	6	6	52
Company K.....	2	69	71	.....	8	8	79
Total.....	29	604	633	3	68	71	704

Percentage present, 89.91.

FOURTEENTH REGIMENT, *Brooklyn.*

The large number of men not completely equipped detracted from the otherwise good appearance of the regiment. The remarks applied to company commanders in last year's report are in full force. Company I is the only one which was properly clean and neat. What this captain accomplished is possible for all.

	PRESENT.			ABSENT.			Aggre- gate. <small>COMPANIES PRESENTED REMARKS COMPS.</small>
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	8	.....	8	2	.....	2	10
Non-commissioned staff....	.....	9	9	.....	.....	....	9
Company A.....	3	54	57	.....	8	8	65
Company B.....	2	38	40	.....	14	14	54
Company C.....	1	33	34	1	15	16	50
Company D.....	3	65	68	.....	.....	....	68
Company E.....	2	45	47	.....	5	5	52
Company F.....	2	39	41	.....	7	7	48
Company G.....	2	36	38	.....	17	17	55
Company H.....	2	25	27	.....	23	23	50
Company I.....	3	46	49	.....	3	3	52
Company K.....	2	45	47	.....	7	7	54
Total.....	30	435	465	3	99	102	567

Percentage present, 82.01.

TWENTY-SECOND REGIMENT, *New York City.*

The inspection reflects high credit on the entire organization and makes manifest the fact that the Twenty-second still maintains its prominent worth among the organizations of the National Guard. All who have labored to accomplish this general result are to be congratulated for success.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	9	.....	9	.....	.....	.....	9
Non-commissioned staff.....	.....	8	8	.....	3	3	11
Company A.....	3	60	63	.....	3	3	66
Company B.....	3	75	78	.....	.....	.....	78
Company C.....	3	47	50	.....	2	2	52
Company D.....	1	35	36	1	2	3	39
Company E.....	3	85	88	.....	3	3	91
Company F.....	3	36	39	.....	2	2	41
Company G.....	3	40	43	.....	7	7	50
Company H.....	1	55	56	1	12	13	69
Company I.....	3	39	42	.....	9	9	51
Company K.....	3	37	40	.....	2	2	42
Total.....	35	517	552	2	45	47	599

Percentage present, 92.15.

TWENTY-THIRD REGIMENT, *Brooklyn.*

The inspection was a decided improvement as compared with last year. With very few exceptions the companies were presented in perfect condition, the deficiencies noted being comparatively trivial.

This excellent organization requires a more commodious drill hall, and it would be creditable to the county to supply the need.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	8	.....	8	1	.....	1	9
Non-commissioned staff.....	.....	11	11	.....	.....	.....	11
Company A.....	3	95	98	.....	5	5	103
Company B.....	3	53	56	.....	.....	.....	56
Company C.....	3	69	72	.....	.....	.....	72
Company D.....	2	48	50	.....	.....	.....	50
Company E.....	3	53	56	.....	1	1	57
Company F.....	3	73	76	.....	1	1	77
Company G.....	2	60	62	.....	4	4	66
Company H.....	3	72	75	.....	2	2	77
Company I.....	3	100	103	.....	.....	.....	103
Company K.....	3	88	91	.....	1	1	92
Total.....	36	722	758	1	14	15	773

Percentage present, 98.05.

THIRTY-SECOND REGIMENT, *Brooklyn.*

No improvement is noted in the condition of this regiment. As a rule discipline is very poor. Companies A, B, G, I and K, are still below the minimum. It is to be hoped that the regiment will show its appreciation of the large amount of money now being expended for its benefit by a new departure. It is of little value at present.

	PRESENT.			ABSENT.			Aggregate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	10	.....	10	.....	.....	...	10
Non-commissioned staff .....	.....	11	11	.....	.....	....	11
Company A.....	2	28	30	.....	8	8	38
Company B.....	2	35	37	.....	4	4	41
Company C.....	1	32	33	1	24	25	58
Company D.....	2	38	40	.....	24	24	64
Company E.....	3	39	42	.....	8	8	50
Company F.....	3	30	33	.....	8	8	41
Company G.....	2	29	31	.....	21	21	52
Company H.....	2	26	28	1	13	14	42
Company I.....	1	20	21	.....	8	8	29
Total.....	28	288	316	2	118	120	436

Percentage present, 72.47.

FORTY-SEVENTH REGIMENT, *Brooklyn.*

The regiment was presented for inspection without knapsacks, haversacks or canteens, so that no comparative criticism can be made. As presented the general appearance was very good.

	PRESENT.			ABSENT.			Aggregate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff	9	.....	9	1	.....	1	10
Non-commissioned staff .....	.....	10.	10	.....	.....	....	10
Company A.....	3	45	48	.....	3	3	51
Company B.....	3	36	39	.....	8	8	47
Company D.....	3	54	57	.....	5	5	62
Company E.....	2	44	46	.....	4	4	50
Company F.....	1	50	51	.....	2	2	53
Company G.....	3	62	65	.....	5	5	70
Company H.....	3	58	61	.....	7	7	68
Company K.....	3	59	62	.....	.....	....	62
Total.....	30	418	448	1	34	35	483

Percentage present, 92.75.

SIXTY-FIFTH REGIMENT, *Buffalo.*

The condition of this organization is still one of progress. Although it is not by comparison so great as at last inspection, there is gratifying evidence of faithful work. The commanding

officer must be sustained in his efforts by company commanders or his work will be of no avail. Companies B, C and G need particularly to look to themselves or they may jeopardize the organization.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	8	.....	8	1	.....	1	9
Non-commissioned staff....	.....	10	10	.....	1	1	11
Company A.....	3	59	62	.....	6	6	68
Company B.....	3	46	49	.....	7	7	56
Company C.....	3	48	51	.....	2	2	53
Company D.....	3	47	50	.....	5	5	55
Company F.....	3	48	51	.....	.....	.....	51
Company G.....	3	39	42	.....	8	8	50
Company H.....	2	50	52	.....	9	9	61
Company I.....	2	49	51	.....	7	7	58
Total.....	30	396	426	1	45	46	472

Percentage present, 90.25.

SIXTY-NINTH REGIMENT, *New York City.*

In general appearance, perfect adjustment of equipments, cleanliness of brasses, the Sixty-ninth at this inspection surpassed itself. The large numbers absent from Companies A, B, D, E and F should be inquired into, particularly Company E. This excellent regiment can not afford to be handicapped with worthless material. Companies D and C are to be specially commended for their neat appearance and clean brasses.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	7	.....	7	2	.....	2	9
Non-commissioned staff...	.....	10	10	.....	1	1	11
Company A.....	3	53	56	.....	29	29	85
Company B.....	2	59	61	1	30	31	92
Company C.....	2	77	79	.....	6	6	85
Company D.....	3	75	78	.....	24	24	102
Company E.....	3	50	53	.....	50	50	103
Company F.....	3	64	67	.....	28	28	95
Company G.....	3	76	79	.....	16	16	95
Company H.....	2	79	81	.....	21	21	102
Company I.....	3	57	60	.....	20	20	80
Company K.....	3	69	72	.....	19	19	91
Total.....	34	669	703	3	244	247	950

Percentage present, 74.

SEVENTY-FIRST REGIMENT, *New York City.*

The progress noted last year has continued in a healthy manner and the regiment is steadily advancing in every way.

This improvement is noted in all companies except D, G, H, and I.

The condition of these companies must be bettered at once or they will prove a serious drag on the organization.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	8	.....	8	1	.....	1	9
Non-commissioned staff....	.....	9	9	.....	2	2	11
Company A.....	2	63	65	1	2	3	68
Company B.....	3	48	51	.....	5	5	56
Company C.....	3	44	47	.....	10	10	57
Company D.....	3	62	65	.....	12	12	77
Company E.....	3	47	50	.....	8	8	58
Company F.....	.....	27	27	.....	12	12	39
Company G.....	2	44	46	1	19	20	66
Company H.....	.....	28	28	.....	22	22	50
Company I.....	3	53	56	.....	10	10	66
Total.....	27	425	452	3	102	105	557

Percentage present, 81.14.

SEVENTY-FOURTH REGIMENT, *Buffalo.*

Notwithstanding the unfortunate condition of affairs in the regiment it seems to have lost nothing in efficiency, in fact in some respects there are indications of improvement, particularly in military appearance and neatness.

Except Companies A and C the regiment is to be complimented in this regard. Companies E, F and G deserve special mention. Military courtesy throughout the regiment is not good.

	PRESENT.			ABSENT.			Aggre- gate.
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	
Field and staff.....	9	.....	9	1	.....	1	10
Non-commissioned staff....	.....	11	11	.....	.....	.....	11
Company A.....	3	45	48	.....	5	5	53
Company B.....	3	55	58	.....	7	7	65
Company C.....	3	34	37	.....	8	8	45
Company D.....	2	39	41	.....	4	4	45
Company E.....	3	51	54	.....	1	1	55
Company F.....	3	49	52	.....	3	3	55
Company G.....	2	37	39	.....	7	7	46
Total.....	28	321	349	1	35	36	385

Present percentage, 90.64.

FIRST SEPARATE COMPANY, *Penn Yan.*

General appearance of the company good, brasses very clean, but shoes dirty and condition of the armory floor filthy. Neatness must prevail or the organization can not succeed. Physically a fine-looking company, and there is no good reason why they should not do very much better.

	Present.	Absent.	Aggregate.
Officers	4	.....	4
Enlisted men	55	6	61
Total	59	6	65

Percentage present, 90.76.

SECOND SEPARATE COMPANY, *Auburn,*

shows a gain of fourteen present and twenty in aggregate as compared with last muster.

A thoroughly strong, reliable and efficient organization, an honor to the State.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men	76	18	.....
Total	79	19	98

Percentage present, 80.61.

THIRD SEPARATE COMPANY, *Oneonta.*

Arms, uniforms and equipments generally very neat and in good condition. More attention by some of the men to proper cleaning of brasses would have been to the credit of the organization. The company has in the main improved during the past year.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men	67	22	.....
Total	70	23	93

Percentage present, 75.26.

FOURTH SEPARATE COMPANY, *Yonkers*.

A very creditable inspection, an excellent company in which improvement is marked.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men.....	67	13	.....
Total.....	70	14	84

Percentage present, 83.33.

FIFTH SEPARATE COMPANY, *Newburgh*.

The condition of this company should improve, and judging from the spirit of its officers it promises well.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men.....	88	9	.....
Total	91	9	100

Percentage present, 91.

SIXTH SEPARATE COMPANY, *Troy*.

This organization loses nothing from the high standard already attained. The willingness, promptness and enthusiasm manifested for so many years still exists. The inspection was neat and perfect in every detail, and manual and company movements were performed with precision and finish difficult to excel.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men.....	95	5	.....
Total	98	6	104

Percentage present, 94.23.

SEVENTH SEPARATE COMPANY, *Cohoes*.

An excellent company and made a very creditable showing.

	Present.	Absent.	Aggregate.
Officers	4	.....	.....
Enlisted men.....	70	.....	.....
Total	74	.....	74

Percentage present, 100.

EIGHTH SEPARATE COMPANY, *Rochester.*

This company maintains its standard of drill and shows an increase of nine men in the aggregate since last inspection. I can see no reason why in the city of Rochester a single company should not always aggregate 103, with a surplus list ready for enlistment.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	58	7	.....
Total	61	7	68

Percentage present, 89.70.

NINTH SEPARATE COMPANY, *Whitehall.*

A surprising change for the better has occurred within a few months in this company, and everything indicates a return to prosperity, provided all work hard and faithfully to attain military proficiency.

	Present.	Absent.	Aggregate.
Officers	4	.....	.....
Enlisted men	47	6	.....
Total	51	6	57

Percentage present, 89.47.

TENTH SEPARATE COMPANY, *Newburgh.*

A remarkable change has taken place in this company, and it appears to have regained all of its former snap and steadiness.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	52	4	.....
Total	55	4	59

Percentage present, 93.22.

ELEVENTH SEPARATE COMPANY, *Mount Vernon*.

This company is not in as good condition as it should be. Unless cleanliness in uniform, equipments and all the surroundings prevails the military part will never be a success.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men	48	7	.....
Total	51	8	59

Percentage present, 86.44.

TWELFTH SEPARATE COMPANY, *Troy*.

No improvement since last inspection, and until present officers resign or radically improve the company can not attain the position it ought to have been in long ago. In its present condition it is of no value, and unless the changes suggested take place it should be disbanded.

	Present.	Absent.	Aggregate.
Officers	2	.....	.....
Enlisted men	67	22	.....
Total	69	22	91

Percentage present, 75.82.

THIRTEENTH SEPARATE COMPANY, *Jamestown*.

Company has been thoroughly reorganized since last inspection and so completely that comparison with the organization of last year would be ridiculous. It is to-day one of the most promising in the State, both in quality and numbers.

	Present.	Absent.	Aggregate.
Officers	4	.....	.....
Enlisted men	89	5	.....
Total	93	5	98

Percentage present, 94.89.

FOURTEENTH SEPARATE COMPANY, *Kingston*.

Radical changes in discipline and drill should take place in this organization forthwith. In its present condition it must be classed among the poorest separate companies of the State.

	Present.	Absent.	Aggregate.
Officers	4	.....	.....
Enlisted men	65	6	.....
Total	69	6	75

Percentage present, 92.00.

It is but just to note that since the inspection of this company they have performed a tour of duty at State camp, which was in every way creditable.

The discharge of all duties comparing favorably with the average company. The commanding officer is to be congratulated for his zeal in bringing about the improvement.

FIFTEENTH SEPARATE COMPANY, *Poughkeepsie*.

A creditable change for the better is apparent in this company, but hard work has yet to be done to approximate efficiency.

	Present.	Absent.	Aggregate.
Officers	1	.....	.....
Enlisted men	52	12	.....
Total	53	12	65

Percentage present, 81.53.

SIXTEENTH SEPARATE COMPANY, *Catskill*.

In view of location and its poor accommodations, quarters, etc., this company is in a fairly good condition.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	47	13	.....
Total	50	13	63

Percentage present, 79.36.

SEVENTEENTH SEPARATE COMPANY, *Flushing*.

The company shows an increase of eight in aggregate and ten in the present as compared with last inspection.

There has been a gratifying improvement during the year, which is commendable to the entire organization.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	53	4	.....
Total.....	57	4	61

Percentage present, 93.44.

EIGHTEENTH SEPARATE COMPANY, *Glens Falls.*

Considerable hard work on the part of the officers is required to place this company where it should have been long ago, considering its comparative advantages. Conspicuous for its absence is the "snap" without which a military company can not succeed.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	53	9	.....
Total.....	57	9	66

Percentage present, 86.36.

NINETEENTH SEPARATE COMPANY, *Poughkeepsie.*

The company has gained two in aggregate since last inspection and is now of maximum strength. In all respects it maintains the very high standard already attained as a most valuable organization.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	95	5	.....
Total.....	99	5	104

Percentage present, 95.19.

TWENTIETH SEPARATE COMPANY, *Binghamton.*

A vast improvement in every detail. Uniforms, equipments and brasses scrupulously clean. The most perfect inspection of the company since its organization.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	60	13	.....
Total.....	64	13	77

Percentage present, 83.11.

TWENTY-FIRST SEPARATE COMPANY, *Troy.*

A marked improvement since last inspection, and it is safe to predict that within a reasonable period, under its present officers, this company will rank among the best in the State.

	Present.	Absent.	Aggregate.
Officers	2	.....	.....
Enlisted men	71	4	.....
Total	73	4	77

Percentage present, 94.80.

TWENTY-SECOND SEPARATE COMPANY, *Saratoga.*

Improvement in drill has been marked in this company during the past two years, and to-day it has few, if any, equals in efficiency. General appearance and condition of property excellent.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	90	1	.....
Total	93	1	94

Percentage present, 98.93.

TWENTY-THIRD SEPARATE COMPANY, *Hudson.*

Although twenty men have been discharged or dropped, the company shows a gain of ten in the aggregate, and in all important points, as compared with last inspection, shows decided improvement.

	Present.	Absent.	Aggregate.
Officers	3	1	.....
Enlisted men	67	4	.....
Total	70	5	75

Percentage present, 93.33.

TWENTY-FOURTH SEPARATE COMPANY, *Middletown.*

The company still lacks very much in all that should exist in a good organization. Equipments loosely and carelessly worn, brasses as a rule not clean, and some with dirty shoes. More thorough instruction in details of drill is required. It can be

made a good company. The captain alone is responsible for the condition of the company.

	Present.	Absent.	Aggregate.
Officers.....	2	2	.....
Enlisted men	58	11	.....
Total	60	13	73

Percentage present, 82.19.

TWENTY-SIXTH SEPARATE COMPANY, *Elmira*.

The company shows a loss of ten in aggregate and twenty-six present compared with last muster. More care needs to be taken in adjusting and wearing equipments; too many loose belts; brasses not as clean as should be.

	Present.	Absent.	Aggregate.
Officers.....	3	.....	.....
Enlisted men	58	24	.....
Total	61	24	85

Percentage present, 71.76.

TWENTY-SEVENTH SEPARATE COMPANY, *Malone*.

A decided improvement has taken place in this organization within the past year, and it is now in a very promising condition.

	Present.	Absent.	Aggregate.
Officers.....	2	.....	.....
Enlisted men	53	6	.....
Total	55	6	61

Percentage present, 90.16.

TWENTY-EIGHTH SEPARATE COMPANY, *Utica*.

A very commendable improvement is shown in the general condition and appearance of this company. It is evidence of what will and work can accomplish. Officers show an improvement, except Second Lieutenant.

	Present.	Absent.	Aggregate.
Officers.....	3	1	.....
Enlisted men	50	17	.....
Total	53	18	71

Percentage present, 74.64.

TWENTY-NINTH SEPARATE COMPANY, *Oswego*.

Company not properly formed. Ceremony of review very faulty. Salutes of officers poor. The company is evidently willing and able, but officers are poor. First Lieutenant is incompetent, and the organization can not prosper unless a change is made.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	44	5	.....
Total	47	5	52

Percentage present, 90.38.

THIRTIETH SEPARATE COMPANY, *Elmira*.

Almost a faultless inspection. A remarkably neat and well-disciplined company and excellent in everything that appertains to a first-class organization.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	57	2	.....
Total	60	2	62

Percentage present, 96.77.

THIRTY-FIRST SEPARATE COMPANY, *Mohawk*.

The general condition of the company shows improvement, and although not by any means perfect the advance made is creditable to all concerned.

	Present.	Absent.	Aggregate.
Officers	3	.....	.....
Enlisted men	53	11	.....
Total	56	11	67

Percentage present, 83.58.

THIRTY-SECOND SEPARATE COMPANY, *Hoosick Falls*.

The drill, while good and even better than the average, did not partake of that precision and life which was so marked at last

inspection. The company must not lack courage, for they still rate high.

	Present.	Absent.	Aggregate.
Officers	4	.....	.....
Enlisted men	76	2	.....
Total	80	2	82

Percentage present, 97.56.

THIRTY-THIRD SEPARATE COMPANY, *Walton.*

A decided improvement on any previous inspection. This is a good, substantial and thoroughly reliable organization.

	Present.	Absent.	Aggregate.
Officers.....	2	2	.....
Enlisted men ..	60	7	.....
Total	62	9	71

Percentage present, 87.32.

THIRTY-FOURTH SEPARATE COMPANY, *Geneva.*

Company very neat except a number of dirty shoes. The organization is a good one, well-officered and reliable.

	Present.	Absent.	Aggregate.
Officers	2	1	.....
Enlisted men	58	6	.....
Total	60	7	67

Percentage present, 89.55.

THIRTY-FIFTH SEPARATE COMPANY, *Ogdensburgh.*

Brasses with few exceptions not clean; in other respects uniforms very neat and equipments generally well adjusted. The company shows a decided improvement in drill; men very steady during the entire ceremony.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men	67	.....	.....
Total	71	.....	71

Percentage present, 100.

THIRTY-SIXTH SEPARATE COMPANY, *Schenectady*.

Company in very good condition; has not retrograded during the past year, but rather improved in all respects. It is regretted that note should have to be made of the filthy habit of spitting on armory floor; it should be stopped at once.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	60	1	.....
Total.....	64	1	65

Percentage present, 98.46.

THIRTY-SEVENTH SEPARATE COMPANY, *Schenectady*.

A lack of general neatness in uniforms. Many helmet chains worn wrong and equipments not neatly adjusted. Spitting on floor of armory is a detestable, filthy habit, which should at once be stopped. It is no mark of a gentleman and any one detected should be vigorously punished.

	Present.	Absent.	Aggregate.
Officers.....	2	.....	.....
Enlisted men.....	67	1	.....
Total.....	69	1	70

Percentage present, 98.57.

THIRTY-EIGHTH SEPARATE COMPANY, *Oswego*.

Company presented a neat, clean appearance. Men very steady. It is in every way in good shape and shows improvement as compared with last inspection.

	Present.	Absent.	Aggregate.
Officers.....	2	.....	.....
Enlisted men.....	55	3	.....
Total.....	57	3	60

Percentage present, 95.

THIRTY-NINTH SEPARATE COMPANY, *Watertown.*

In every way a good company, substantial, reliable and efficient

	Present.	Absent.	Aggregate.
Officers.....	3	1	.....
Enlisted men.....	65	5	.....
Total.....	68	6	74

Percentage present, 91.89.

FORTIETH SEPARATE COMPANY, *Syracuse.*

The company shows gratifying progress in drill and general appearance, and is apparently in a healthy condition. Military courtesy is very poor and should be given immediate attention.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	59	3	.....
Total.....	63	3	66

Percentage present, 95.48.

FORTY-FIRST SEPARATE COMPANY, *Syracuse.*

Company in excellent condition as regards drill and discipline. A falling off in military courtesy is apparent, which should at once be checked.

	Present.	Absent.	Aggregate.
Officers.....	3	.....	.....
Enlisted men.....	62	12	.....
Total.....	65	12	77

Percentage present, 84.41.

FORTY-SECOND SEPARATE COMPANY, *Niagara Falls.*

This inspection developed wonderful progress during the past year. The drill has greatly improved. In general appearance, proper wearing of accoutrements, neatness and discipline, it equaled, if not excelled, any organization I have ever inspected.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	91	8	.....
Total.....	95	8	103

Percentage present, 92.23.

FORTY-THIRD SEPARATE COMPANY, *Olean*.

The company is to be congratulated on progress made during the past year. A continuance of energetic work will soon place it high in the list of separate companies.

	Present.	Absent.	Aggregate.
Officers.....	3	.....	.....
Enlisted men	75	4	.....
Total	78	4	82

Percentage present, 95.12.

FORTY-FOURTH SEPARATE COMPANY, *Utica*.

The first inspection and muster of this organization fully confirms the remarks in report of muster-in one year ago. The general appearance, neatness and soldierly bearing was excellent, and the drill surprisingly good for a company so recently organized.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men	58	11	.....
Total.....	62	11	73

Percentage present, 84.93.

FORTY-FIFTH SEPARATE COMPANY, *Cortland*.

The first inspection of the company and in every way creditable. The make-up of the organization is such as must develop into one of our best separate companies.

	Present.	Absent.	Aggregate.
Officers.....	4	.....	.....
Enlisted men.....	43	14	.....
Total.....	47	14	61

Percentage present, 77.04.

FORTY-SIXTH SEPARATE COMPANY, *Amsterdam*.

Mustered into the service September 3, 1888.

	Present.	Absent.	Aggregate.
Officers.....	.....	.....	.....
Enlisted men.....	68	.....	.....
Total.....	68	.....	68

FIRST BRIGADE SIGNAL CORPS, *New York.*

This corps is composed of most excellent material, neat in dress and equipment, and, considering the short time since its organization, is remarkably well advanced in the work of signaling. It must and will undoubtedly prove a success; it has already developed some four men who send and receive with remarkable speed and accuracy.

	Present.	Absent.	Aggregate.
Officers.....	.....	.....	.....
Enlisted men.....	20	4	.....
Total.....	20	4	24

Percentage present, 83.33.

SECOND BRIGADE SIGNAL CORPS, *Brooklyn,*

is composed of a body of men whose sole ambition seems to be to excel in the branch of the service to which they are attached. Neat in uniform and equipment, excellent in discipline and military courtesy, and proficient in the signal drill, they are of great value to the service and a credit to the State.

	Present.	Absent.	Aggregate.
Officers.....	.....	.....	.....
Enlisted men	18	3	.....
Total	18	3	21

Percentage present, 85.71.

FIRST BATTERY, *New York.*

At this inspection the battery excelled any previous parade of the kind. The increase in present and aggregate and the most excellent drill added to the high reputation already achieved.

	Present.	Absent.	Aggregate.
Officers.....	5	.....	.....
Enlisted men	100	6	.....
Total	105	6	111

Percentage present, 94.59.

SECOND BATTERY, *New York City.*

The exhibition of this organization was in the extreme creditable. In general appearance, soldierly bearing and excellence of drill is to be highly commended. It is thoroughly efficient and reliable. It is now quartered in a suitable and commodious building and must continue to prosper.

	Present.	Absent.	Aggregate.
Officers	5	.....	.....
Enlisted men	95	7	.....
Total	100	7	107

Percentage present, 93.45.

THIRD BATTERY, *Brooklyn.*

Arms and all equipments in good condition except girths, which are rotten and unsafe. A gain of seventeen (17) in aggregate and eighteen (18) present, as compared with last muster, indicates a healthy condition of affairs.

	Present.	Absent.	Aggregate.
Officers	4	1	.....
Enlisted men	71	4	.....
Total	75	5	80

Percentage present, 93.75.

FIFTH BATTERY, *Syracuse.*

Battery in very good condition. Limbers and caissons sound and serviceable; sponges worn; no guidon; uniforms with few exceptions very good; belts old enameled, soft, rusty-looking and not fit for use; harness in very good condition. Drill, as usual, very good, giving evidence of careful instruction, and lacking nothing except snap, which is accounted for by a large number of recruits present.

	Present.	Absent.	Aggregate.
Officers	6	.....	.....
Enlisted men	57	9	.....
Total	63	9	72

Percentage present, 87.50.

SIXTH BATTERY, *Binghamton.*

The report made on last inspection of this battery still applies in full. Neatness of dress and equipment and exhibition of drill can hardly be improved.

	Present.	Absent.	Aggregate.
Officers.....	3	.....	.....
Enlisted men.....	57	10	.....
Total.....	60	10	70

Percentage present, 85.71.

I take great pleasure in acknowledging the valuable assistance at inspections of Major A. P. Montant, Inspector First Brigade ; Major Gustave A. Jahn, Inspector Second Brigade ; Lieut.-Col. Charles Clifton, Assistant Inspector-General, and Major Nathaniel Rochester, Inspector Fourth Brigade.

During the month of September Lieut.-Col. F. C. McLewee, by reason of being obliged to devote his entire time to his business, forwarded his resignation as assistant in this department. This severance of official relations was to me a source of great regret. The zeal and interest manifested by this officer, together with his unquestioned ability, made him a most valuable coworker. His services can not be overestimated and his efforts to raise the standard of instruction can not be too highly appreciated.

I have the honor to be, General,

Very respectfully your obedient servant.

THOMAS H. McGRATH,
Colonel and Assistant Inspector-General.

(E.)

REPORTS OF THE CHIEF OF ORDNANCE FOR 1888.

STATE OF NEW YORK:

OFFICE OF CHIEF OF ORDNANCE, }
NEW YORK, December 15, 1888. }

The Adjutant-General State of New York:

SIR. — I have the honor to report the following purchases and expenditures, account of State camp for season of 1888. Detailed accounts of same have previously been forwarded to you, viz.:

Blank cartridges, fifty caliber, cartridge-bags, sponges, powder and primers	\$1,600 00
Candles, candle-sticks, oil, lanterns, repairs, etc.....	576 70
Cleaning and renovating blankets	416 46
Cots, mattresses, camp-stools, etc.....	1,187 50
Pails, brooms, rakes, wheelbarrows, mallets, shovels, etc.,	610 90
Tent-pins and stakes.....	553 00
Watering cart (exchanged)	200 00
Crockery	406 66
Coal for pump.....	24 20
Hardware, nails, paints, etc.....	380 41
Hay, oats, straw and seed.....	330 67
Lumber and carpenter work	717 21
Repairing tents, camp-stools, canvas, etc.....	377 41
Medical supplies, disinfectants, assistance in medical department, hospital supplies, etc	902 16
Services sanitary experts	\$146 13
Labor and material sanitary improvements..	622 45
	<hr/>
	768 58
Transportation camp equipage and stores.....	606 00
Carting camp equipage and stores, and baggage of troops from dock to camp grounds and return from camp, services engineer, watchmen, labor, express charges, freight, disinfector, scavenger, stationery, telegrams, hire of ambulance, etc	8,891 84

Transportation of troops to and from camp	\$19,353 82
Subsistence of troops.	44,588 94
Hire of horses for use of field officers	652 50
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Total	\$83,144 96
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I would most respectfully invite your attention to the importance and necessity of the following needed improvements and additions to the State camp and grounds, before it is again occupied by the troops, viz. :

First. The extending of the sewer pipe far enough to reach the channel of the river.

Second. The addition of bath-house accommodations.

Third. The camp and company streets to be guttered and lined with small cobble stones, to improve the drainage.

Fourth. The grading and seeding of the grounds, which still retain almost their natural level.

Fifth. The building of a new mess hall and kitchen. The present structures were originally erected the first year, or opening of the camp in 1882, and then were regarded as only temporary and experimental buildings; each year they have required more or less repairs (which could not be made permanent), until it is no longer advisable, in their present condition, to make any repairs upon them. They should be taken down and replaced with buildings of more extended capacities and substantial character.

Sixth. The erection of an ice-house capable of holding about six hundred tons has become an indispensable necessity and should be erected.

Seventh. The road leading from the entrance of camp to Roa Hook is often covered in places by the tides, and at times much inconvenience has been experienced by the troops going to and returning from camp, as well as to the transportation of camp equipage, stores and supplies. To overcome this difficulty the road should be raised and walled in some places.

Eighth. A shelter or shed should be erected at Roa Hook for the convenience of the troops, and protection from the elements when arriving and departing.

Ninth. I would also call your attention to the matter of tents, those now in use plainly showing the effect of long service, and their present condition does not warrant much longer use.

Many of the additions and improvements suggested would require to be made in the spring and early summer to enable those having charge of the work to complete the same in time for occupancy by the troops.

I am, sir, very respectfully yours.

J. M. VARIAN,
Brig-Gen. and Chief of Ordnance, S. N. Y.

STATE OF NEW YORK :

OFFICE OF CHIEF OF ORDNANCE, }
NEW YORK, *December 27, 1888.* }

The Adjutant-General, State of New York:

SIR. — Pursuant to M. C. 21, I have the honor to submit herewith a detailed report of the business of this department from September 30, 1887, to September 30, 1888, inclusive.

Abstract A. Receipts and disbursements of cash in the Ordnance Department, S. N. Y., from September 30, 1887, to September 30, 1888, inclusive.

Abstract B. Annual return of ordnance and ordnance stores and other military property, in charge of Brigadier-General J. M. Varian, Chief of Ordnance and acting Quartermaster-General, S. N. Y., for year ending September 30, 1888.

Abstract C. Military property of the State of New York, issued to organizations of the National Guard, S. N. Y., and State officers during the year ending September 30, 1888.

Abstract D. Military property of the State of New York received from organizations of the National Guard, S. N. Y., for year ending September 30, 1888.

Abstract E. Receipts and disbursements of cash under a commission consisting of Major-General Josiah Porter, Adjutant-General; Brigadier-General Emil Schaefer, Inspector-General, and Brigadier-General J. M. Varian, Chief of Ordnance, appointed by law for the building and improvement of State armories and improvement of State camp grounds.

I am, sir, very respectfully yours.

J. M. VARIAN,
Brigadier-General and Chief of Ordnance, S. N. Y.

ABSTRACT A.

RECEIPTS AND DISBURSEMENTS OF CASH IN THE ORDNANCE DEPARTMENT, STATE OF NEW YORK, FROM SEPTEMBER 30, 1887, TO SEPTEMBER 30, 1888.

Receipts.

Cash on hand (in contingent fund)	\$3,762 57
Cash received from State Treasurer in payment of purchases, as per detailed monthly accounts.....	142,995 25
Cash received from State Treasurer in payment of expenditures, as per detailed monthly accounts.....	3,442 05
Cash received from State Treasurer in payment of repairs of arsenals, as per detailed monthly accounts.....	15,131 85
Cash received from State Treasurer in payment of services, as per detailed monthly accounts.....	17,673 88
Cash received from State Treasurer in payment of transportation of troops, rifle practice, as per detailed monthly accounts, season 1887	\$4,168 25
Cash received from State Treasurer in payment of transportation of troops, rifle practice, as per detailed monthly accounts, season 1888	3,645 12
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Cash received from State Treasurer in payment of purchase of canvas targets and repairs to rifle ranges, as per detailed monthly accounts.....	7,813 37
Cash received from State Treasurer in payment of expenditures on account of centennial celebration at Philadelphia, as per detailed account.....	677 67
Cash received from State Treasurer in payment of expenditures for tour of Fifth battery, as per detailed account,	11,796 19
Cash received from State Treasurer in payment of expenditures of Ninth regiment to Gettysburg (chapter 288, Laws 1888)	960 50
Cash received from State Treasurer in payment of repairs to Flushing State Armory (chapter 410, Laws of 1887),	7,000 00
Cash received from State Treasurer in payment of purchases, expenditures, transportation, subsistence, etc., on account of State camp, season 1888, as per detailed special report	2,934 63
Cash received from sale of old iron roof, Buffalo State Armory.....	83,144 96
	267 95
	<hr/>
	<u>\$297,600 87</u>

Disbursements.

Cash paid for purchases, as per detailed monthly accounts	\$142,995 25
Cash paid for expenditures, as per detailed monthly accounts	3,442 05
Cash paid for repairs of arsenals, as per detailed monthly accounts	15,131 85
Cash paid for services, as per detailed monthly accounts,	17,673 88
Cash paid for transportation of troops, rifle practice, as per detailed monthly accounts, season 1887	\$4,168 25
Cash paid for transportation of troops, rifle practice, as per detailed monthly accounts, season 1888	3,645 12
	<hr/>
	7,813 37
Cash paid for purchase of canvas targets and repairs to rifle ranges, as per detailed monthly accounts.....	677 67
Cash paid for expenditures on account of centennial celebration at Philadelphia, as per detailed account..	11,796 19
Cash paid for expenditures for tour of Fifth battery, as per detailed account	960 50
Cash paid for expenditures of Ninth regiment to Gettysburg (chapter 288, Laws of 1887).....	7,000 00
Cash paid for repairs to Flushing State Armory (chapter 410, Laws of 1887).....	2,934 63
Cash paid for purchases, expenditures, transportation, subsistence, etc., on account of State camp, season 1888, as per detailed special report	83,144 96
Balance on hand.....	4,030 52
	<hr/>
	<hr/>
	\$297,600 87

ABSTRACT B.

Annual return of ordnance and ordnance stores and other public property in charge of Brigadier-General J. M. Varian, Chief of Ordnance, and Acting Quartermaster-General, S. N. Y., for year ending September 30, 1888.

	Parrott guns, 20-pounder.	DeLafield guns, 20-pounder.	Field howitzers, 12-pounder.	Mountain howitzers, 12-pounder.	Napoleon guns, 12-pounder.	Parrott guns, 10-pounder.	Brass guns, 6-pounder.	Iron guns, 6-pounder.	Steel guns, 3-inch.	Brass guns, 3-pounder.	Brass guns, 2-pounder.	Brass guns, Spanish.	Brass guns, English trophy.	Mortars, 8-inch.	Mortars, 6-inch.	Breech sights.	Elevation screw and bed.
On last annual return.....	2	4	7	4	6	15	1	2	6	2	1	1	1	1	1	14	1
Purchased, received upon requisition, taken up, fabricated, etc.....																	
Received from organizations of the National Guard, etc.....				*1													
Total	2	4	7	5	6	15	1	2	6	2	1	1	1	1	1	14	1
Issued.....					†1												
Serviceable and unserviceable property on hand.....	2	4	7	5	5	15	1	2	6	2	1	1	1	1	1	14	1
Serviceable property on hand.....																	
Unserviceable property on hand.....	2	4	7	5	5	15	1	2	6	2	1	1	1	1	1	14	1
Unserviceable property, condemned, expended and destroyed.....																	
On hand to be accounted for, serviceable.....																	
On hand to be accounted for, unserviceable.....	2	4	7	5	5	15	1	2	6	2	1	1	1	1	1	14	1
Total on hand to be accounted for.....	2	4	7	5	5	15	1	2	6	2	1	1	1	1	1	14	1

* Received in exchange.

† Issued in exchange.

ABSTRACT B—(Continued).

	Gatling guns, caliber 50.	Assembly rest for Gat- ling gun, caliber 50.	Gatling gun feed cases.	Gatling gun feed-case pouches.	Gun carriages.	Caissons.	Limbers.	Battery wagons.	Travelling forges.	Pendulum hausse.	Leg guards.	Spare wheels.	Spare poles.	Tomplions and straps.	Trail handspikes.	Sponges.	Watering buckets, oak.
On last annual return	3	1	52	2	39	23	29	1	2	31	12	26	26	7	69	29	28
Purchased, received upon requisition, taken up, fabricated, etc.																8	
Received from organizations of the National Guard, etc.																	
Total	3	1	52	2	39	23	29	1	2	31	12	26	26	7	69	37	28
Issued																	
Serviceable and unserviceable property on hand	3	1	52	2	39	23	29	1	2	31	12	26	26	7	69	37	28
Serviceable property on hand	3	1	52	2	4	2	4									8	14
Unserviceable property on hand					35	21	25	1	2	31	12	26	26	7	69	29	14
Unserviceable property, condemned, expended and destroyed																37	
On hand to be accounted for, serviceable	3	1	52	2	4	2	4										14
On hand to be accounted for, unserviceable					35	21	25	1	2	31	12	26	26	7	69		14
Total on hand to be accounted for	3	1	52	2	39	23	29	1	2	31	12	26	26	7	69		28

ABSTRACT B—(Continued).

	Vent covers.	Pole pads.	Tarpaulins.	Priming wires.	Thumbstalls.	Gunners' gimlets.	Pick-axes.	Vent punches.	Hooks and lanyards.	Hand tongues.	Hammers and staves.	Hammers and sponges.	Tube pouches and belts.	Sponge buckets.	Tar buckets.	Sponge heads.	Cushions for limber chests.
On last annual return	5	.....	21	30	23	3	12	4	9	1	15	22	5	2	17	26	56
Purchased, received upon requisition, taken up, fabricated, etc. ....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc. ....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	5	4	21	30	23	3	12	4	9	1	15	30	5	2	17	26	56
Issued.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	5	2	21	30	23	3	12	4	9	1	15	22	5	2	17	26	56
Serviceable property on hand.....	.....	.....	.....	.....	.....	.....	12	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Unserviceable property on hand.....	5	2	21	30	23	3	.....	4	9	.....	15	22	5	2	17	26	56
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable.....	5	2	21	30	23	3	.....	4	9	.....	15	22	5	2	.....	26	56
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	12	.....	.....	1	.....	.....	.....	.....	17	.....	56
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	.....	.....	.....	.....	.....	.....	12	.....	.....	1	.....	.....	.....	.....	17	.....	56

ABSTRACT B—(Continued).

	Prolongs.	Gunnery' haversacks.	Worms and staves.	Bridles.	Bridle bits.	Nosebags.	Stirrups.	Stirrup straps.	Drivers' whips.	Martingales and collars.	Shabracks.	Spurs.	Saddles.	Saddle cloths.	Picket rope, feet of.	Saddle girths.	Halters.
On last annual return.....	5	7	2	268	297	43	361	361	40	266	13	332	283	143	.....	26	45
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	10
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	5	7	2	268	297	43	361	361	40	266	13	332	283	143	150	26	55
Issued.....	.....	.....	.....	1	1	.....	2	2	3	1	.....	.....	1	1	.....	1	.....
Serviceable and unserviceable property on hand.....	5	7	2	267	296	43	359	359	37	265	13	332	282	142	150	25	55
Serviceable property on hand.....	.....	.....	.....	13	13	.....	.....	.....	.....	13	13	.....	.....	.....	150	.....	55
Unserviceable property on hand.....	5	7	2	254	283	43	359	359	37	252	.....	332	282	142	.....	25	.....
Unserviceable property condemned, expended and destroyed.....	5	5	.....	.....	34	43	.....	.....	.....	33	.....	32	.....	.....	.....	.....	44
On hand to be accounted for, serviceable.....	.....	.....	.....	13	13	.....	.....	.....	.....	.....	13	.....	.....	.....	150	.....	11
On hand to be accounted for, unserviceable.....	5	2	2	254	249	.....	359	359	37	219	.....	300	282	142	.....	25	.....
Total on hand to be accounted for.....	.....	2	2	267	262	.....	359	359	37	232	13	300	282	142	150	25	11

ABSTRACT B — (Continued).

	Hames.	Hame straps.	Horse collars.	Saddle valises.	Saddle bags.	Breechings.	Wheel traces.	Lead traces.	Trussing straps.	Belly bands.	Coupling reins.	Back straps.	Trace loops.	Hip straps.	Valise straps.	Slide loops.	Breast straps.
On last annual return.....	100	56	48	15	32	26	52	48	53	41	24	48	96	24	48	24	24
Purchased, received upon requisition, taken up, fabricated, etc.....																	
Received from organizations of the National Guard, etc.....																	
Total.....	100	56	48	15	32	26	52	48	53	41	24	48	96	24	48	24	24
Issued.....																	
Serviceable and unserviceable property on hand.....	100	56	48	15	32	26	52	48	53	41	24	48	96	24	48	24	24
Serviceable property on hand.....	100	56	48	15	32	26	52	48	53	41	24	48	96	24	48	24	24
Unserviceable property on hand.....																	
Unserviceable property, condemned, expended and destroyed.....		56	4			6											
On hand to be accounted for, serviceable.....	100		44	15	32	20	52	48	53	41	24	48	96	24	48	24	24
On hand to be accounted for, unserviceable.....																	
Total on hand to be accounted for.....	100		44	15	32	20	52	48	53	41	24	48	96	24	48	24	24

ABSTRACT B — (Continued).

	Hooks and loops.	Gating gun harness (sets).	Rosettes for bridles.	Curry-combs.	Horse brushes.	Hand grenades.	Shells, 3 inch, Abster-dam.	Parrott shells, 20-pounder.	Shells, 20-pounder, elongated.	Shells, 12-pounder.	Shells, 10-pounder.	Shells, 6-pounder.	Shells, 24-pounder, spherical.	Shells, 2 9-10 inches, ordnance.	Hotechkiss projectiles, 3 inches.	Case shot, 3 inches, Absterdam.	Case shot, 20-pounder.
On last annual return.....	98	1	...	...	...	10	1,036	121	456	1,032	316	1,192	129	501	2,506	470	300
Purchased, received upon requisition, taken up, fabricated, etc.....	...	...	20	18	...	...	...	...	...	...	...	...	...	...	...	...	...
Received from organizations of the National Guard, etc.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	98	1	20	18	18	10	1,036	121	456	1,032	316	1,192	129	501	2,506	470	300
Issued.....	...	...	20	18	18	...	...	...	...	...	...	...	...	...	...	150	...
Serviceable and unserviceable property on hand.....	98	1	...	...	...	10	1,036	121	456	1,032	316	1,192	129	501	2,506	320	300
Serviceable property on hand.....	...	1	...	...	...	...	...	...	...	1,032	316	1,192	129	501	2,506	320	...
Unserviceable property on hand.....	98	...	...	...	...	10	1,036	121	456	...	...	...	129	...	...	...	300
Unserviceable property, condemned, expended and destroyed.....	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...
On hand to be accounted for, serviceable.....	...	1	...	...	...	...	1,036	121	456	1,032	316	1,192	129	501	2,506	320	...
On hand to be accounted for, unserviceable.....	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	300
Total on hand to be accounted for.....	98	1	...	...	...	...	1,036	121	456	1,032	316	1,192	129	501	2,506	320	300

ABSTRACT B—(Continued).

	Case shot, 12-pounder.	Case shot, 10-pounder ordnance.	Case shot, 6-pounder.	Strap shot, 6-pounder.	Solid shot, 6-pounder.	Solid shot, 9-pounder.	Solid shot, 12-pounder.	Canister shot, 3-inch.	Canister shot, 6-pounder.	Canister shot, 12-pounder.	Cannon powder, pounds.	Cartridge bags.	Blank cannon cartridges.	Friction primers.	Berdan primers.	Time fuse.	Electric exploder.
	823	387	1,106	306	1,454	137	450	199	2,571	840	700	500	400	22,000	15,000	211	...
On last annual return	823	387	1,106	306	1,454	137	450	199	2,571	840	700	500	400	22,000	15,000	211	...
Purchased, received upon requisition, taken up, fabricated, etc.											700	500	400	8,500			1
Received from organizations of the National Guard, etc.																	
Total	823	387	1,106	306	1,454	137	450	199	2,571	840	700	500	400	30,500	15,000	211	1
Issued							100				700	500	400	10,500			1
Serviceable and unserviceable property on hand	823	387	1,106	306	1,454	137	350	199	2,571	840				20,000	15,000	211	
Serviceable property on hand				306	1,454	137	350	199	2,571	840							
Unserviceable property on hand	823	387	1,106											20,000	15,000	211	
Unserviceable property, condemned, expended and destroyed														6,500		211	
On hand to be accounted for, serviceable				306	1,454	137	350	199	2,571	840				13,500	15,000		
On hand to be accounted for, unserviceable	823	387	1,106														
Total on hand to be accounted for	823	387	1,106	306	1,454	137	350	199	2,571	840				13,500	15,000		

ABSTRACT B — (Continued).

	Electric primers.	Insulated copper wire, yards.	Metallie ball cartridges, 50-70.	Blank metallie cartridges, caliber 50.	Metallie ball cartridges, caliber 45 (for Colts' revolver).	Paper targets.	Remington rifles, caliber 50.	Remington bayonets.	Cadet muskets.	Cadet musket bayonets.	Whitney rifles, caliber 44.	Springfield rifles.	Springfield bayonets.	Enfield rifles.	Enfield bayonets.	Remington carbines, caliber 50.	Smith's carbines.
On last annual return			788,407	92,693	8,000	.....	4,241	4,413	90	53	97	658	643	148	148	1,154	312
Purchased, received upon requisition, taken up, fabricated, etc.....	250	100	600,000	100,000	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc.....			14,000	.....	.....	.....	10	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	250	100	1,402,407	192,693	8,000	8	4,251	4,414	90	53	97	658	643	148	148	1,154	312
Issued.....	250	100	574,444	85,000	3,000	8	397	399	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand			827,963	107,693	5,000	.....	3,854	4,015	90	53	97	658	643	148	148	1,154	312
Serviceable property on hand.....			745,556	94,425	5,000	.....	3,661	3,882	.....	.....	.....	.....	.....	.....	.....	1,129	.....
Unserviceable property on hand.....			82,407	13,268	.....	.....	193	133	90	53	97	658	643	148	148	25	312
Unserviceable property condemned, expended and destroyed .....			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable.....			745,556	94,425	5,000	.....	3,661	3,882	.....	.....	.....	.....	.....	.....	.....	1,129	.....
On hand to be accounted for, unserviceable.....			82,407	13,268	.....	.....	193	133	90	53	97	658	643	148	148	25	312
Total on hand to be accounted for.....			827,963	107,693	5,000	.....	3,854	4,015	90	53	97	658	643	148	148	1,154	312

ABSTRACT B— (Continued).

Ballard carbines.	Revolvers, old style.	Revolvers, breech-loading.	Cavalry pistols, muzzle-loading.	Wingate indicators.	Aliming tripods.	Remington screw-drivers.	Reloading implements, sets.	Sabers.	Non-commissioned officers' swords.	Non-com. officers' swordbards.	Cross belts, dress.	Cross belt plates, dress.	Waist belts, dress.	Waist belt plates, dress.	Cartridge boxes, dress.	Bayonet scabbards, dress.
81	28	180	69	344	15	390	2	354	34	34	756	348	417	333	165	99
On last annual return								10								
Purchased, received upon requisition, taken up, fabricated, etc.				63				4			193	90	52	45	100	95
Received from organizations of the National Guard, etc.											949	438	469	378	265	194
Total	81	28	180	69	407	15	390	368	34	34						
Issued.....		124				5		40								
Serviceable and unserviceable property on hand.....	81	28	56	69	407	15	385	328	34	34	949	438	469	378	265	194
Serviceable property on hand.....			56													
Unserviceable property on hand.....	81	28		69	407	15	385	328	34	34	949	438	469	378	265	194
Unserviceable property, condemned, expended and destroyed							385	2								
On hand to be accounted for, serviceable.....			56													
On hand to be accounted for, unserviceable.....	81	28		69	407	15		328	34	34	949	438	469	378	265	194
Total on hand to be accounted for	81	28	56	69	407	15		328	34	34	949	438	469	378	265	194

ABSTRACT B—(Continued).

	Waist belts, fatigue, old model.	Waist belt plates, fatigue, old model.	Cartridge boxes, fatigue, old model.	Bayonet scabbards, fatigue, old model.	Waist belts, fatigue, new model.	Waist belt plates, fatigue, new model.	Cartridge boxes, fatigue, new model.	Bayonet scabbards, fatigue, new model.	Pistol holsters.	Drummers' waist belts and plates.	Saber belts.	Saber belt plates.	Non-commissioned officers' sword belts.	Non-commissioned officers' sword frogs.	Cap pouches.	Carbine slings.	Gun slings.
On last annual return	5,531	1,207	3,729	2,958	1,081	1,081	1,081	1,081	182	.....	434	366	11	11	62	18	475
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	.....	.....	.....	1,505	1,505	1,505	1,505	.....	2	.....	.....	.....	.....	.....	.....	1,296
Received from organizations of the National Guard, etc	1,455	1,469	1,466	1,442	65	65	65	65	.....	.....	161	161	.....	.....	.....	.....	220
Total	6,986	2,676	5,195	4,400	2,651	2,651	2,651	2,651	182	2	595	527	11	11	62	18	1,991
Issued.....	7	7	27	7	2,437	2,437	2,437	2,437	124	2	129	129	.....	.....	.....	.....	1,276
Serviceable and unserviceable property on hand.....	6,979	2,669	5,168	4,393	214	214	214	214	58	.....	466	398	11	11	62	18	715
Serviceable property on hand.....	.....	.....	.....	.....	214	214	214	214	58	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property on hand.....	6,979	2,669	5,168	4,393	.....	.....	.....	.....	.....	.....	466	398	11	11	62	18	715
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable.....	.....	.....	.....	.....	214	214	214	214	58	.....	466	398	11	11	62	18	715
On hand to be accounted for, unserviceable.....	6,979	2,669	5,168	4,393	.....	.....	.....	.....	.....	.....	466	398	11	11	62	18	715
Total on hand to be accounted for.....	6,979	2,669	5,168	4,393	214	214	214	214	58	.....	466	398	11	11	62	18	715

ABSTRACT B — (Continued).

	Saber knots.	Knapsacks.	Haversacks.	Canteens.	Overcoats.	State service coats.	State service trousers.	State service helmets.	Helmet plumes.	Helmet cords.	State service forage caps.	Uniform coats, all styles, except overcoats.	Uniform trousers, all styles of, unserviceable.	Dress hats.	Pompons.	Epaulettes.	Helmet bags.
On last annual return.....	47	2,275	1,733	2,802	408	.....	1	299	.....	.....	259	866	1,418	180	774	329	69
Purchased, received upon requisition, taken up, fabricated, etc.....	65	.....	.....	.....	.....	2,515	2,598	2,524	109	109	2,748	.....	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc.....	.....	116	74	108	81	.....	.....	164	109	109	270	463	372	146	81	.....	.....
Total.....	112	2,391	1,807	2,910	489	2,515	2,599	2,987	109	109	3,277	1,329	1,790	326	855	329	69
Issued.....	83	644	539	537	185	2,515	2,599	2,543	.....	.....	2,767	19	19	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	29	1,747	1,268	2,373	304	.....	.....	444	.....	.....	510	1,310	1,771	326	855	329	69
Serviceable property on hand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property on hand.....	29	1,747	1,268	2,373	304	.....	.....	444	.....	.....	510	1,310	1,771	326	855	329	69
Unserviceable property, condemned, expended and destroyed.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
On hand to be accounted for, serviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, unserviceable.....	29	1,747	1,268	2,373	304	.....	.....	444	.....	.....	510	1,310	1,771	326	855	329	.....
Total on hand to be accounted for.....	29	1,747	1,268	2,373	304	.....	.....	444	.....	.....	510	1,310	1,771	326	855	329	.....

ABSTRACT B—(Continued).

	Leggins.	Blankets, woolen.	Blankets, rubber.	Blouses, old style.	Blouses, State service.	National colors, silk.	State colors, silk.	Ordnance colors, silk.	Brigade colors, silk.	Garrison flags, bunting.	Storm flags, bunting.	National Guard flags, bunting.	Post flags, bunting.	State flags, bunting.	Press flags, bunting.	Hospital flags, bunting.	Guidons, Infantry.
On last annual return	26	4,126	140	383	.....	23	40	1	3	5	1	2	2	3	1	1	34
Purchased, received upon requisition, taken up, fabricated, etc. ....	.....	.....	.....	.....	12,000	7	3	.....	.....	.....	.....	.....	5	.....	.....	.....	8
Received from organizations of the National Guard, etc. ....	.....	65	.....	600	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	26	4,191	140	1,013	12,045	30	43	1	3	5	1	2	7	3	1	1	42
Issued .....	.....	100	.....	.....	4,735	4	3	.....	.....	.....	.....	.....	5	.....	.....	.....	8
Serviceable and unserviceable property on hand.	26	4,091	140	1,043	7,310	26	40	1	3	5	1	2	2	3	1	1	34
Serviceable property on hand. ....	.....	3,956	135	1,043	7,310	4	1	.....	.....	.....	.....	2	2	2	.....	1	2
Unserviceable property on hand.	26	135	15	.....	.....	22	39	1	3	5	1	.....	.....	1	1	.....	32
Unserviceable property, condemned, expended and destroyed .....	.....	135	15	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable. ....	.....	3,956	125	.....	7,310	4	39	1	3	5	1	2	2	2	1	1	2
On hand to be accounted for, unserviceable.	26	.....	.....	979	.....	22	1	.....	.....	.....	.....	.....	.....	1	.....	.....	32
Total on hand to be accounted for.	26	3,956	125	979	7,310	26	40	1	3	5	1	2	2	3	1	1	34

ABSTRACT B — (Continued).

	Guidons, cavalry.	Guidons, artillery.	Markers.	Color cords and tassels.	Color sockets and slings.	Guidon sockets and straps.	Color bearers' waist belts and plates.	Flag poles with gilt balls.	Color staves.	Guidon staves.	Marker staves.	Gilt eagles.	Color covers.	Guidon covers.	Marker covers.	Signal equipments, sets of.	Five-gallon copper cans.
On last annual return	14	14	58	17	2	4	.....	2	56	33	4	31	9	2	4	.....	2
Purchased, received upon requisition, taken up, fabricated, etc. ....	.....	1	12	10	9	.....	2	.....	10	6	14	7	10	6	10	19	.....
Received from organizations of the National Guard, etc. ....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	14	16	72	27	11	4	2	2	66	39	18	38	19	8	14	19	2
Issued .....	.....	1	12	7	9	.....	2	.....	7	6	14	7	7	6	10	19	2
Serviceable and unserviceable property on hand	14	15	60	20	2	4	.....	2	59	33	4	31	12	2	4	.....	.....
Serviceable property on hand .....	.....	.....	6	5	2	.....	.....	2	5	2	4	2	5	2	4	.....	.....
Unserviceable property on hand	14	15	54	15	.....	4	.....	.....	54	31	.....	29	7	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	.....	.....	.....	.....	20	15	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable ..	.....	.....	6	5	2	.....	.....	2	5	2	4	2	5	2	4	.....	.....
On hand to be accounted for, unserviceable ..	14	15	54	15	.....	4	.....	.....	34	16	.....	29	7	.....	.....	.....	.....
Total on hand to be accounted for	14	15	60	20	2	4	.....	2	39	18	4	31	12	2	4	.....	.....

ABSTRACT B — (Continued).

Signal practice flags.	Signal flag staves.	Asbestos lamp wick.	Cotton lamp wick.	Lantern wicks, gross of.	Wind matches, gross of.	Turpentine, gallons of.	Bass drum sticks.	Bass drum heads.	Bass drum ropes.	Snare drums.	Snare drum sticks.	Snare drum slings.	Snare drum heads, batter.	Snare drum heads.	Snare drum covers.	Snare drum snares.
On last annual return.....	18	.....	.....	.....	.....	.....	.....	.....	.....	23	5	27	.....	.....	.....	.....
Purchased, received upon requisition, taken up, fabricated, etc.....	6	10	10	1	½	10	2	4	2	23	46	57	147	118	4	40
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	11	3	.....	.....	.....	.....
Total.....	24	10	10	1	½	10	2	4	2	69	62	87	147	118	4	40
Issued.....	24	10	10	1	½	10	2	4	2	23	46	57	147	118	4	40
Serviceable and unserviceable property on hand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	16	30	.....	.....	.....	.....
Serviceable property on hand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	16	30	.....	.....	.....	.....
Unserviceable property on hand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	30	.....	.....	.....	.....
On hand to be accounted for, serviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	.....	.....	.....	.....	.....	.....

ABSTRACT B—(Continued).

	Snare drum ropes.	Snare drum braces.	Snare drum hooks.	Snare drum snare tighteners.	Bugles.	Bugle cords and tassels.	Wall tents.	Wall tent flies.	Wall tent poles, ridge.	Wall tent poles, upright.	Hospital tents.	Hospital tent flies.	Hospital tent poles, ridge.	Hospital tent poles, upright.	A tents.	A tent poles, ridge.	A tent poles, upright.
On last annual return .....	.....	31	42	.....	18	.....	827	683	742	1,321	43	38	42	77	261	300	600
Purchased, received upon requisition, taken up, fabricated, etc.	100	380	40	27	7	7	.....	.....	.....	.....	6	6	6	12	.....	.....	.....
Received from organizations of the National Guard, etc. ....	.....	76	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	100	487	104	27	25	7	827	683	742	1,321	49	44	48	89	261	300	600
Issued	100	380	40	27	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand .....	.....	107	64	.....	18	.....	827	683	742	1,321	49	44	48	89	261	300	600
Serviceable property on hand .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property on hand .....	.....	107	64	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable. On hand to be accounted for, unserviceable ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for .....	.....	.....	.....	.....	18	.....	827	683	742	1,321	49	34	48	89	241	241	504

REPORT OF THE ADJUTANT-GENERAL.

ABSTRACT B—(Continued).

	Tent stakes.	Tent pins.	A tent floors.	Wall tent floors.	Hospital tent floors.	Mallets for driving pins.	Sentry boxes.	Bulletin boards.	Shovels.	Spades.	Felling axes.	Hay rakes, wooden.	Iron rakes.	Table knives.	Table forks.	Table spoons.	Tea spoons.
On last annual return	10,280	9,940	18	455	40	12	18	13	66	55	22	103	9	1,903	2,222	6,870	500
Purchased, received upon requisition, taken up, fabricated, etc.	5,084	8,144	.....	.....	.....	6	.....	.....	48	.....	.....	96	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	15,364	17,084	18	455	40	18	18	13	114	55	22	199	9	1,903	2,222	6,870	500
Issued.....	15,364	17,084	18	455	40	18	18	13	114	55	22	199	9	1,903	2,222	6,870	500
Serviceable and unserviceable property on hand.....	10,364	13,084	18	455	40	12	18	13	94	45	17	179	9	969	1,237	6,870	500
Unserviceable property on hand.....	5,000	4,000	.....	.....	.....	6	.....	.....	20	10	5	20	.....	934	985	.....	.....
Unserviceable property, condemned, expended and destroyed	5,000	4,000	.....	.....	.....	6	.....	.....	20	10	5	20	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable.....	10,364	13,084	18	455	40	12	18	13	94	45	17	179	9	969	1,237	6,870	500
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	934	985	.....	.....
Total on hand to be accounted for.....	10,364	13,084	18	455	40	12	18	13	94	45	17	179	9	1,903	2,222	6,870	500

ABSTRACT B—(Continued).

	Tin cups.	Large iron spoons.	Tin plates.	Tin wash-basins.	Camp kettles.	Water pails.	Tin milk cans, eighty gallons.	Knife pails.	Camp stools.	Wooden stools.	Wooden chairs.	Camp and steamer chairs.	Arm chair.	Rocking chair.	Sofa chairs.	Bed cots.	Mattresses.
On last annual return.....	8,373	5	9,398	3,921	100	1,338	1	59	1,260	1,153	20	12	1	1	4	1,138	.....
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	.....	.....	.....	.....	108	.....	.....	204	100	.....	.....	.....	.....	.....	100	1,200
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	8,373	5	9,398	3,921	100	1,446	1	59	1,464	1,253	20	12	1	1	4	1,238	1,200
Issued.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	8,373	5	9,398	3,921	100	1,446	1	59	1,464	1,253	20	12	1	1	4	1,238	1,200
Serviceable property on hand.....	8,183	5	9,398	3,921	100	1,246	1	29	1,389	1,068	20	12	1	1	4	1,113	.....
Unserviceable property on hand.....	190	.....	.....	.....	.....	200	.....	30	75	185	.....	.....	1	1	.....	125	1,200
Unserviceable property, condemned, expended and destroyed.....	190	.....	.....	.....	.....	.....	.....	.....	75	185	.....	.....	.....	.....	.....	125	1,200
On hand to be accounted for, serviceable.....	8,183	5	9,398	3,921	100	1,246	1	29	1,389	1,068	20	12	1	1	4	1,113	.....
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	8,183	5	9,398	3,921	100	1,246	1	29	1,389	1,068	20	12	1	1	4	1,113	.....

ABSTRACT B—(Continued).

	Hand lanterns.	Tubular lamps.	Reflector lamps.	Bracket lamps.	Chandeliers.	Tin candlesticks.	Wicks for tubular lamps.	Candles, boxes of.	Kerosene oil, gallons of.	Oil cans.	Lamp chimneys.	Lamp and lantern globes.	Lamp burners.	Lamp oil, gallons of.	Seythe blades.	Seythe snaths.	Earth closet.
On last annual return.....	124	96	27	.....	2	1,172	.....	.....	.....	.....	.....	.....	.....	.....	4	8	1
Purchased, received upon requisition, taken up, fabricated, etc.....	21	24	.....	6	.....	576	36	100	5	3	6	84	12	600	.....	.....	.....
Received from organizations of the National Guard, etc.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	149	120	27	6	2	1,748	36	100	5	3	6	84	12	600	4	8	1
Issued.....	21	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	128	120	27	6	2	1,748	36	100	.....	3	6	84	12	600	4	8	1
Serviceable property on hand.....	124	60	.....	6	2	1,248	36	100	.....	3	6	84	12	600	4	8	1
Unserviceable property on hand.....	4	60	27	.....	.....	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed.....	.....	60	27	.....	.....	500	36	100	.....	.....	6	84	12	600	.....	.....	.....
On hand to be accounted for, serviceable.....	124	60	.....	6	2	1,248	.....	.....	.....	3	.....	.....	.....	.....	4	8	1
On hand to be accounted for, unserviceable.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	128	60	.....	6	2	1,248	.....	.....	.....	3	.....	.....	.....	.....	4	8	1

ABSTRACT B—(Continued).

	Uniform trunks.	Small tables.	Dining tables, feet of.	Extension dining table	Center table.	Gun racks for tents.	Toilet paper, cases of.	Sprinkling carts.	Water tank.	Refrigerator.	Clothes racks for officers' tents.	Hoes.	Sickles.	Wash-tubs.	Stationary wash-tubs.	Brooms.	Whisk brooms.
On last annual return.....	7	88	470	.....	1	200	.....	2	1	1	63	45	12	18	4	.....	.....
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	20	.....	1	.....	.....	14	.....	.....	.....	.....	.....	.....	24	.....	612	16
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	7	108	470	1	1	200	14	2	1	1	63	45	12	42	4	612	16
Issued.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	7	108	470	1	1	200	14	2	1	1	63	45	12	42	4	612	16
Serviceable property on hand.....	7	90	470	1	1	200	14	2	1	1	63	25	12	22	4	612	16
Unserviceable property on hand.....	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	20	.....	.....	.....
Unserviceable property, condemned, expended and destroyed.....	.....	18	.....	.....	.....	.....	14	.....	.....	.....	23	20	.....	20	.....	612	16
On hand to be accounted for, serviceable.....	7	90	470	1	1	200	.....	2	1	1	40	25	12	22	4	.....	.....
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	7	90	470	1	1	200	.....	2	1	1	40	25	12	22	4	.....	.....

ABSTRACT B — (Continued).

	Wheelbarrows.	Hatchets.	Meat saws.	Butcher's cleaver.	Butcher's steels.	Coffee cups.	Saucers.	Sauce plates.	Water tumblers.	Soup bowls.	Dinner plates.	Meat platters.	Pie plates, crockery.	Pie plates, tin.	Pickle dishes.	Salt and pepper stands.	Vinegar bottles.
On last annual return	53	5	1	1	4	1,517	1,500	1,415	1,806	1,564	2,352	502	1,425	340	170	499	180
Purchased, received upon requisition, taken up, fabricated, etc.	27	.....	.....	.....	.....	750	500	.....	.....	800	800	100	.....	.....	.....	216	.....
Received from organizations of the National Guard, etc. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	80	5	1	1	4	2,267	1,090	1,415	1,806	2,364	3,152	602	1,425	340	170	715	180
Issued .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand	80	5	1	1	4	2,267	1,090	1,415	1,806	2,364	3,152	602	1,425	340	170	715	180
Serviceable property on hand	50	5	1	1	.....	.....	.....	1,415	1,806	2,364	3,152	602	1,425	265	170	715	180
Unserviceable property on hand	30	.....	.....	.....	4	2,267	1,090	1,415	1,806	2,364	3,152	602	1,425	75	170	715	180
Unserviceable property, condemned, expended and destroyed	30	3	.....	.....	4	2,267	1,090	1,415	1,806	2,364	3,152	602	1,425	265	.....	.....	.....
On hand to be accounted for, serviceable	50	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, unserviceable .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for	50	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	265	.....	.....	.....

ABSTRACT B—(Continued).

	Mustard pots.	Mustard spoons.	Sugar bowls.	Water pitchers.	Milk pitchers.	Vegetable dishes.	Butter dishes.	Syrup cups.	Soup tureens.	Soup ladles.	Baking dishes (stone).	Soup kettles.	Range and boiler, etc.	Furnace and kettle.	Tin coffee pots.	Copper coffee urns.	Iron kettles, 70 gals.
On last annual return.....	180	128	249	182	141	355	78	130	6	5	145	8	1	1	49	2	5
Purchased, received upon requisition, taken up, fabricated, etc.....						100	100								12		
Received from organizations of the National Guard, etc.....			100	100													
Total.....	180	128	349	282	141	455	178	130	6	5	145	8	1	1	61	2	5
Issued.....																	
Serviceable and unserviceable property on hand.....	180	128	349	282	141	455	178	130	6	5	145	8	1	1	61	2	5
Serviceable property on hand.....	180	128	349	282	141	455	178	130	6	5	145	8	1	1	51	2	5
Unserviceable property on hand.....															10		
Unserviceable property, condemned, expended and destroyed.....	180	128	349	282	141	455	178	130	6	5	145				10		5
On hand to be accounted for, serviceable.....												8	1	1	51	2	5
On hand to be accounted for, unserviceable.....																	
Total on hand to be accounted for.....												8	1	1	51	2	5

ABSTRACT B— (Continued).

	Fish boilers.	Vegetable steamers.	Potato boilers.	Coffee kettles, 110 gals.	Water boilers.	Iron water coolers, 20 gals.	Graters.	Cullenders.	Dippers.	Tin coffee pails.	Skimmers.	Steam trap.	Pump, "Dean."	Cooking range.	Dish pans.	Sauce pans.	Frying pans.
On last annual return.....	7	4	4	1	3	12	2	2	9	71	3	1	1	1	9	2	14
Purchased, received upon requisition, taken up, fabricated, etc.....										40							
Received from organizations of the National Guard, etc.....																	
Total	7	4	4	1	3	12	2	2	9	111	3	1	1	1	9	2	14
Issued.....																	
Serviceable and unserviceable property on hand.....	7	4	4	1	3	12	2	2	9	111	3	1	1	1	9	2	14
Serviceable property on hand.....	7	4	4	1	1	12	2	2	9	77	3	1	1	1	6	2	14
Unserviceable property on hand.....					2					34					3		
Unserviceable property, condemned, expended and destroyed.....			4		2		2			34					3		
On hand to be accounted for, serviceable.....	7	4		1	1	12		2	9	77	3	1	1	1	6	2	14
On hand to be accounted for, unserviceable.....																	
Total	7	4		1	1	12		2	9	77	3	1	1	1	6	2	14

ABSTRACT B — (Continued).

	Baking pans.	Drip pans.	Potato masher.	Baskets.	Letter presses.	Desk chairs.	Surgical instruments (field cases).	Surgical instruments (pocket cases).	Hospital knapsacks.	Medical cases.	Field stretchers.	Hospital closet.	Medical show case.	Hospital desk.	Anvils.	Pincers, blacksmiths'.	Tongs.
On last annual return.....	12	5	1	79	2	2	7	17	11	1	3	1	1	1	3	6	11
Purchased, received upon requisition, taken up, fabricated, etc.....				36							100						
Received from organizations of the National Guard, etc.....																	
Total	12	5	1	115	2	2	7	17	11	1	103	1	1	1	3	6	11
Issued.....											41						
Serviceable and unserviceable property on hand.....	12	5	1	115	2	2	7	17	11	1	62	1	1	1	3	6	11
Serviceable property on hand.....	12	5	1	54	1	2	7	17	11	1	59	1	1	1	3	6	11
Unserviceable property, condemned, expended and destroyed				61	1						3						
On hand to be accounted for, serviceable.....	12	5	1	61	1	2	7	17	11	1	59	1	1	1	3	6	11
On hand to be accounted for, unserviceable.....				54	1												
Total on hand to be accounted for.....	12		1	54	1	2	7	17	11	1	59	1	1	1	3	6	11

ABSTRACT B— (Continued).

	Punches.	Mattocks.	Breast knives.	Jack screws.	Claw-bars.	Crowbars.	Bill hooks.	Sledge hammers.	Hand hammers.	Swabs.	Platters.	Forge shovels.	Cold chisels.	Fullers.	Creasers.	Nail sets, blacksmiths'.	Broad-axes.
On last annual return.....	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2
Issued.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand.....	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2
Serviceable property on hand.....	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2
Unserviceable property on hand.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
On hand to be accounted for, serviceable.....	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	4	4	2	3	2	2	2	2	2	2	2	3	12	4	2	5	2

ABSTRACT B—(Continued).

	Machinists' lathes.	Emery lathes.	Drilling machines.	Screw-drivers.	Claw-hammers.	Gouges.	Braces.	Bits, assorted.	Chisels.	Gauges.	Cross-cut saws.	Rip saws.	Keyhole saws.	Panel saws.	Buck saws.	Saw sets.	Nail sets, carpenters'.
On last annual return	1	2	1	3	3	3	2	12	6	1	2	2	1	2	1	1	2
Purchased, received upon requisition, taken up, fabricated, etc.																	
Received from organizations of the National Guard, etc.																	
Total	1	2	1	3	3	3	2	12	6	1	2	2	1	2	1	1	2
Issued.....																	
Serviceable and unserviceable property on hand.....	1	2	1	3	3	3	2	12	6	1	2	2	1	2	1	1	2
Serviceable property on hand.....	1	2	1	2	1	2	2	6	6		2	2	1	1	1	1	2
Unserviceable property on hand.....				1	2	3		6		1				1			
Unserviceable property, condemned, expended and destroyed.....				1	2	3		6		1				1			
On hand to be accounted for, serviceable.....	1	2	1	2	1		2	6	6		2	2	1	1	1	1	2
On hand to be accounted for, unserviceable.....																	
Total on hand to be accounted for.....	1	2	1	2	1		2	6	6		2	2	1	1	1	1	2

ABSTRACT B—(Continued).

	Joining planes.	Smoothing planes.	Jack planes.	Plow planes and irons.	Taps and dies, sets of.	Files, assorted.	Tap wrenches.	Drawing knives.	Bevels.	Glue pots.	Oil cans, carpenters'.	Oil stone.	Rules, two foot.	Chalk line.	Squares, steel.	Panel squares.	Dividers.
On last annual return	1	1	1	1	1	7	1	1	1	1	2	1	1	1	1	1	1
Purchased, received upon requisition, taken up, fabricated, etc. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Received from organizations of the National Guard, etc. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	1	1	1	1	1	7	1	1	1	1	2	1	1	1	1	1	1
Issued .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Serviceable and unserviceable property on hand	1	1	1	1	1	7	1	1	1	1	2	1	1	1	1	1	1
Serviceable property on hand	1	1	1	1	1	7	1	1	1	1	2	1	1	1	1	1	1
Unserviceable property on hand .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	.....	7	1	.....	.....	.....	.....	.....	.....	1	1	1	1
On hand to be accounted for, serviceable	1	1	1	1	1	.....	.....	1	1	1	2	1	1	.....	1	.....	.....
On hand to be accounted for, unserviceable .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for	1	1	1	1	1	.....	.....	1	1	1	2	1	1	.....	1	.....	1

ABSTRACT B—(Continued).

	Hand screws.	Pliers.	Mallets (carpenters).	Brad-awls.	Monkey wrenches.	Grindstones.	Vises.	Vise bench.	Marking pot and br'sh.	Nail dogs.	Scrapers.	Step ladders.	Runn ladders.	Fire extinguishers.	Charges for fire extinguishers.	Platform trucks.	Hand trucks.
On last annual return.....	4	1	1	3	2	1	3	1	1	1	1	2	2	2	4	1	4
Purchased, received upon requisition, taken up, fabricated, etc.....																	
Received from organizations of the National Guard, etc.....																	
Total	4	1	1	3	2	1	3	1	1	1	1	2	2	2	4	1	4
Issued.....																	
Serviceable and unserviceable property on hand.....	4	1	1	3	2	1	3	1	1	1	1	2	2	2	4	1	4
Serviceable property on hand.....		1				1	3	1	1	1	1	2	2	2	4	1	4
Unserviceable property on hand.....	4		1	3	2												
Unserviceable property, condemned, expended and destroyed.....	4		1	3	2	1	3	1	1	1	1	2	2	2		1	4
On hand to be accounted for, serviceable.....		1															
On hand to be accounted for, unserviceable.....																	
Total on hand to be accounted for.....		1				1	3	1	1	1	1	2	2	2	4	1	4

ABSTRACT B—(Continued).

	Platform scales.	Counter scales.	Riveting hammers.	Ordnance stamp.	Rubber hose, feet of.	Packing cases.	Arm chests.
On last annual return	1	1	1	1	150	.....	1
Purchased, received upon requisition, taken up, fabricated, etc.....	.....	.....	.....	.....	300	174	6
Received from organizations of the National Guard, etc.....	.....	.....	.....	.....	.....	29	13
Total.....	1	1	1	1	450	203	20
Issued.....	.....	.....	.....	.....	.....	203	17
Serviceable and unserviceable property on hand	1	1	1	1	450	.....	3
Serviceable property on hand.....	1	1	1	1	200	.....	3
Unserviceable property on hand.....	.....	.....	.....	.....	250	.....	.....
Unserviceable property, condemned, expended and destroyed .....	.....	.....	.....	.....	250	.....	.....
On hand to be accounted for, serviceable.....	1	1	1	1	200	.....	3
On hand to be accounted for, unserviceable.....	.....	.....	.....	.....	.....	.....	.....
Total on hand to be accounted for.....	1	1	1	1	200	.....	3

ABSTRACT C.

Military property of the State of New York issued to organizations of the National Guard, S. N. Y., and State Officers during the year ending September 30, 1888.

	Pole pads.	Rammers and sponges.	Bridles.	Bridle bits.	Stirrups and straps.	Drivers' whips.	Martingales and collars.	Saddles.	Saddle cloths.	Saddle girths.	Rosettes for bridles.	Curry combs.	Horse brushes.	Case shot, three in absterdam.	Solid shot, 12-pounder.
General Inspector of Rifle Practice.....															
First Brigade Staff.....															
Second Brigade Staff.....															
First Brigade Signal Corps.....															
Second Brigade Signal Corps.....															
Major Balch, Surgeon, Tenth Battalion.....			1	1	2		1	1	1	1					
Seventh Regiment.....															
Eighth Regiment.....		8													
Ninth Regiment.....															
Tenth Battalion.....															
Eleventh Regiment.....															
Twelfth Regiment.....															
Thirteenth Regiment.....															
Fourteenth Regiment.....															
Twenty-second Regiment.....															
Twenty-third Regiment.....															
Thirty-second Regiment.....															
Forty-seventh Regiment.....															
Sixty-fifth Regiment.....															
Sixty-ninth Regiment.....															
Seventy-first Regiment.....															
Seventy-fourth Regiment.....															
First Separate Company.....															
Second Separate Company.....															
Third Separate Company.....															
Fourth Separate Company.....															
Fifth Separate Company.....															
Sixth Separate Company.....															

[illegible]

[illegible]

ABSTRACT C — (Continued).

	Overcoats, gray.	State service coats.	State service trousers.	State service helmets.	Helmet plumes.	Helmet cords.	State service forage caps.	Uniform coats, second class.	Uniform trousers, second class.	State service blouses.	Blankets, woolen.	National colors, silk.	State colors, silk.	Post flags, bunting.	Guidons, infantry.
General Inspector of Rifle Practice.....															
First Brigade Staff.....															
Second Brigade Staff.....															
First Brigade Signal Corps.....		21	21	21	21	21	21								
Second Brigade Signal Corps.....		4	4	21			21	19							
Major Balch, Surgeon, Tenth Battalion.....	17														
Seventh Regiment.....															
Eighth Regiment.....		129	129	129			129								
Ninth Regiment.....		115	115	115			115			371					
Tenth Battalion.....		39	39	30			49								
Eleventh Regiment.....		136	134	134			134								
Twelfth Regiment.....		89	93	117			117								
Thirteenth Regiment.....		236	236	203			203			550		1	1	1	2
Fourteenth Regiment.....		96	96	99			99			500		1	1		2
Twenty-second Regiment.....		72	74	50			101								2
Twenty-third Regiment.....		95	95	91			91			330					
Forty-seventh Regiment.....		174	174	128			80			410		1	1	1	2
Sixty-fifth Regiment.....		118	115	135			335			450					2
Sixty-ninth Regiment.....		141	141	151			151			750					2
Seventy-first Regiment.....		72	72	119			119			350		1		1	
Seventy-fourth Regiment.....		23	23	21			21			80					
First Separate Company.....		34	34	34			34								
Second Separate Company.....		10	34	10			10								
Third Separate Company.....		19	19	19			19								
Fourth Separate Company.....		26	29	26			26								
Fifth Separate Company.....															
Sixth Separate Company.....															
Seventh Separate Company.....		3	3	3			3								
Eighth Separate Company.....		17	17	17											
Ninth Separate Company.....		9	13	8			13								
Tenth Separate Company.....		13	13	13			23			55					
Eleventh Separate Company.....		11	11	11			11								

[illegible]

Twelfth Separate Company	.....	10	1	½	10	2	4	2	23	46	57	147	118	4
Thirteenth Separate Company	.....												
Fourteenth Separate Company	.....												
Fifteenth Regiment	.....												
Sixteenth Separate Company	.....												
Seventeenth Separate Company	.....												
Eighteenth Separate Company	.....												
Nineteenth Separate Company	.....												
Twentieth Separate Company	.....												
Twenty-first Separate Company	.....												
Twenty-second Separate Company	.....												
Twenty-third Separate Company	.....												
Twenty-fourth Separate Company	.....												
Twenty-fifth Separate Company	.....												
Twenty-sixth Separate Company	.....												
Twenty-seventh Separate Company	.....												
Twenty-eighth Separate Company	.....												
Twenty-ninth Separate Company	.....												
Thirtieth Separate Company	.....												
Thirty-first Separate Company	.....												
Thirty-second Separate Company	.....												
Thirty-third Separate Company	.....												
Thirty-fourth Separate Company	.....												
Thirty-fifth Separate Company	.....												
Thirty-sixth Separate Company	.....												
Thirty-seventh Separate Company	.....												
Thirty-eighth Separate Company	.....												
Thirty-ninth Separate Company	.....												
Fortieth Separate Company	.....												
Forty-first Separate Company	.....												
Forty-second Separate Company	.....												
Forty-third Separate Company	.....												
Forty-fourth Separate Company	.....												
Forty-fifth Separate Company	.....												
First Battery Artillery	.....												
Second Battery Artillery	.....												
Third Battery Artillery	.....												
Fifth Battery Artillery	.....												
Sixth Battery Artillery	.....												
Total.....		10	1	½	10	2	4	2	23	46	57	147	118	4

[illegible]

ABSTRACT C — (*Concluded*).

	Blank metal cartgs., cal. 50.
First Provisional Regiment (at camp).....	4,960
Second Provisional Regiment (at camp).....	5,000
Third Provisional Regiment (at camp).....	4,500
Fourth Provisional Regiment (at camp).....	3,500
Fifth Provisional Regiment (at camp).....	5,000
Sixth Provisional Regiment (at camp).....	5,000
Seventh Provisional Regiment (at camp).....	5,000
Eighth Provisional Regiment (at camp).....	4,000
<hr/>	
Total (blank metallic cartridges, cal. 50)....	85,000
<hr/> <hr/>	

ABSTRACT D.

Military property of the State of New York received from organizations of the National Guard, S. N. Y., for year ending September 30, 1888.

	Pole pads.	Metallic ball cartridges, 50.70.	Remington rifles, caliber 50.	Remington bayonets.	Winrate indicators.	Sabers.	DRESS.						FATIGUE, OLD MODEL.			
							Cross belts.	Cross belt plates.	Waist belts.	Waist belt plates.	Cartridge boxes.	Bayonet scabbards.	Waist belts.	Waist belt plates.	Cartridge boxes.	Bayonet scabbards.
Major Eagle, First Brigade Staff	1	..	..	..	193	90	52	45	100	95	..	151	188	..
Ninth Regiment	116	92
Tenth Battalion	63	..	..	..	..	..	..	..	..	..	..	..
Eleventh Regiment	..	2,000	..	..	..	..	..	..	..	..	..	..	645	624	683	684
Twelfth Regiment	..	12,000	6	..	..	..	..	..	..	..	..	..	..	..	..	..
Forty-seventh Regiment
Sixty-fifth Regiment	2	..	..	..	..	..	..	..	..	..	85	85	89	90
Third Separate Company	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Fifth Separate Company
Seventh Separate Company
Ninth Separate Company
Thirteenth Separate Company	69	69	71	71
Fifteenth Separate Company	48	50	49	47
Eighteenth Separate Company	57	57	57	57
Twenty-third Separate Company
Twenty-eighth Separate Company	60	60	60	60
Twenty-ninth Separate Company	55	53	59	60
Thirtieth Separate Company	75	75	75	75
Thirty-first Separate Company	70	70	70	70
Thirty-third Separate Company
Thirty-fourth Separate Company	69	68	69	68
Thirty-seventh Separate Company	68	68	68	68
Thirty-eighth Separate Company
Thirty-ninth Separate Company
Fifth Battery, Artillery	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sixth Battery, Artillery
Total	2	14,000	11	1	63	4	193	90	52	45	1,000	95	1,455	1,469	1,465	1,442

ABSTRACT D — (Continued).

	FATIGUE, NEW MODEL.				Sabre belts and plates.	Gun slings.	Knapsacks.	Haversacks.	Canteens.	Overcoats, gray.	Helmets.	Plumes, old style.	Forage caps.	Uniform coats (all styles except overcoats).	Uniform trousers (all styles).
	Waist belts.	Waist belt plates.	Cartridge boxes.	Bayonet scabbards.											
Major Eagle, First Brigade Staff.....	65	65	65	65	161	220	116	74	108	81	164	60	285	463	372
Ninth Regiment															
Tenth Battalion															
Eleventh Regiment															
Twelfth Regiment															
Forty-seventh Regiment															
Sixty-fifth Regiment															
Third Separate Company															
Fifth Separate Company															
Seventh Separate Company															
Ninth Separate Company															
Thirteenth Separate Company															
Fifteenth Separate Company															
Eighteenth Separate Company															
Twenty-third Separate Company															
Twenty-eighth Separate Company															
Twenty-ninth Separate Company	65	65	65	65											
Thirtieth Separate Company															
Thirty-first Separate Company															
Thirty-third Separate Company															
Thirty-seventh Separate Company															
Thirty-eighth Separate Company															
Thirty-ninth Separate Company															
Fifth Battery, Artillery					87	67									
Sixth Battery, Artillery					74										
Total	65	65	65	65	161	220	116	74	108	81	164	60	285	463	372

ABSTRACT D — (Continued).

	Dress hats.	Pompoms.	Blankets, woolen.	Blouses, old style.	Blouses, State service.	Guidons, artillery.	Markers.	Snare drums.	Snare drum sticks.	Snare drum slings.	Snare drum braces.	Snare drum hooks.	Hand lanterns.	Packing cases.	Arm chests.
Major Eagle, First Brigade Staff															
Ninth Regiment															
Tenth Battalion															
Eleventh Regiment															
Twelfth Regiment															
Forty-seventh Regiment								20							
Sixty-fifth Regiment															
Third Separate Company				27			2		7		76	22			8
Fifth Separate Company															1
Seventh Separate Company															1
Ninth Separate Company															1
Thirteenth Separate Company	71		65	69				1		1					4
Fifteenth Separate Company															
Eighteenth Separate Company															
Twenty-third Separate Company	75	81		71											
Twenty-eighth Separate Company															
Twenty-ninth Separate Company					45										
Thirtieth Separate Company															
Thirty-first Separate Company															
Thirty-third Separate Company															
Thirty-seventh Separate Company								2	4	2					
Thirty-eighth Separate Company															
Thirty-ninth Separate Company															
Fifth Battery, Artillery				38		1							4		
Sixth Battery, Artillery															
Total	146	81	65	205	45	1	2	23	11	3	76	22	4	29	13

ABSTRACT E.

RECEIPTS AND DISBURSEMENTS OF CASH UNDER A COMMISSION CONSISTING OF MAJOR-GENERAL JOSIAH PORTER, ADJUTANT-GENERAL; BRIGADIER-GENERAL EMIL SCHAEFER, INSPECTOR-GENERAL; BRIGADIER-GENERAL J. M. VARIAN, CHIEF OF ORDNANCE, APPOINTED BY LAW FOR THE BUILDING OF ARMORIES AND IMPROVEMENTS TO STATE CAMP, FROM SEPTEMBER 30, 1887, TO SEPTEMBER 30, 1888.

Receipts.

Cash received from State Treasurer and disbursed on account of improvements at State Camp (chapter 460, Laws of 1887)	\$13,971 37
Cash received from State Treasurer and disbursed on account of Troy Armory (chapter 330, Laws of 1886),	600 07
Cash received from State Treasurer and disbursed on account of Elmira Armory (chapter 283, Laws of 1887),	21,906 12
Cash received from State Treasurer and disbursed on account of Brooklyn Armory (chapter 663, Laws of 1887)	42,147 65
Cash received from State Treasurer and disbursed on account of Binghamton Military Storehouse (chapter 642, Laws of 1887).....	8,622 46
Cash received from State Treasurer and disbursed on account of new overcoats (chapter 460, Laws of 1887),	15,270 60
Total	<u><u>\$102,518 27</u></u>

(F.)

REPORT OF THE PAYMASTER-GENERAL FOR 1888.

STATE OF NEW YORK :

PAYMASTER-GENERAL'S OFFICE, }
ALBANY, *December 31, 1888.* }

The Adjutant-General, State of New York, Albany :

SIR.—I have the honor to report that I received on March 6, 1888, from Colonel E. L. Judson, 2d, Acting Paymaster-General, the sum of fourteen hundred and ten dollars (\$1,410.00), as follows :

Proclamation, Governor Morgan, bounty fund	\$575 00
Chapter 184, Laws of 1863, bounty fund	20 00
July (1877) riots, absentee fund	815 00
	<hr/>
	\$1,410 00

No payments have been made from either of the above funds, and the amount as above stated is deposited to my credit in the New York State National Bank of Albany.

Very respectfully

Your obedient servant.

WALTER C. STOKES,
Brigadier-General and Paymaster-General, S. N. Y.

(G.)

REPORT OF PAYMASTER AT CAMP OF INSTRUCTION.

GENERAL HEADQUARTERS, STATE OF NEW YORK, }
ADJUTANT-GENERAL'S OFFICE, ALBANY, *December 31, 1888.* }

PAY DEPARTMENT.

The Adjutant-General, State of New York:

SIR.—Having been detailed by Paragraph III of Special Orders No. 55, dated General Headquarters, State of New York, Adjutant-General's office, May 29, 1888, as paymaster at the Camp of Instruction during the season of 1888, I have the honor to report:

The report of my details during the year ending December 31, 1887, showed a balance to my credit of \$12,688.68, distributed as follows:

Proclamation Governor Morgan bounty fund.....	\$575 00
Chapter 184, Laws of 1863, bounty fund.....	20 00
July (1877) riots, absentee fund.....	815 00
National Guard, services fund.....	11,278 68

Total	\$12,688 68
-------------	-------------

By your direction I turned over to Brigadier-General

Walter C. Stokes, Paymaster-General.....	1,410 00
--	----------

Leaving balance in my hands of	\$11,278 68
--------------------------------------	-------------

The amount received from the State Treasurer upon
requisitions drawn by me on the Comptroller, under
section 70, M. C., was.....

60,000 00

Total	\$71,278 68
-------------	-------------

The expenditures were as follows:

Fourteenth Regiment.....	\$4,714 50
First Provisional Battalion, field and staff...	146 00
Nineteenth Separate Company.....	618 00
Twenty-ninth Separate Company.	590 25
Thirty-ninth Separate Company.....	648 00
Forty-second Separate Company.....	929 75

\$7,646 50

Thirty-second Regiment.....	\$3,780 25	
Second Provisional Battalion, field and staff..	145 00	
Third Separate Company.....	924 00	
Twenty-sixth Separate Company.....	887 50	
Thirty-third Separate Company.....	726 00	
Thirty-sixth Separate Company.....	660 00	
	<hr/>	\$7,122 75
Eleventh Regiment.....	\$5,537 25	
Third Provisional Battalion, field and staff..	148 00	
First Separate Company.....	676 00	
Thirteenth Separate Company.....	897 25	
Thirty-fourth Separate Company.....	642 75	
Fortieth Separate Company.....	604 00	
	<hr/>	8,505 25
Sixty-fifth Regiment.....	\$4,697 00	
Fourth Provisional Battalion, field and staff,	172 00	
Fourth Separate Company.....	684 75	
Tenth Separate Company.....	549 00	
Eighteenth Separate Company.....	556 00	
Thirtieth Separate Company.....	524 50	
	<hr/>	7,183 25
Sixty-ninth Regiment.....		7,974 00
Thirteenth Regiment.....	\$5,782 50	
Third Battery..	693 50	
	<hr/>	6,476 00
Eighth Regiment.....	\$4,500 50	
Fifth Provisional Battalion, field and staff...	152 00	
Twenty-eighth Separate Company.....	756 00	
Thirty-first Separate Company.....	561 00	
Thirty-seventh Separate Company.....	692 75	
Forty-third Separate Company.....	781 75	
	<hr/>	7,444 00
Sixth Provisional Battalion, field and staff...	\$150 00	
Seventh Separate Company.....	757 75	
Eighth Separate Company.....	662 00	
Twelfth Separate Company.....	719 25	
Twenty-first Separate Company.....	791 50	
Seventh Provisional Battalion, field and staff,	88 00	
Second Separate Company.....	837 00	
Twenty-third Separate Company.....	708 00	
Twenty-seventh Separate Company.....	614 00	
Thirty-second Separate Company.....	814 00	

Eighth Provisional Battalion, field and staff..	\$152 00	
Fourteenth Separate Company.....	603 00	
Fifteenth Separate Company.....	588 50	
Sixteenth Separate Company.....	518 50	
Twenty-fourth Separate Company	641 25	
	<hr/>	\$8,644 75
Details First Battery.....		585 75
Details Second Battery.....		667 00
Post band		5,089 30
Post staff.....		1,197 75
Brigadier-General Jos. D. Bryant.		54 00
Expenses pay department.....		398 91
		<hr/>
		\$68,989 21
By your direction I also paid the Fifth Battery, for duty performed under section 3, Special Orders No. 94, c. s., A. G. O.....		688 50
Total		<hr/>
		\$69,677 71

Leaving a total balance in my hands at this date of \$1,600.97, which is deposited in the National Commercial Bank of Albany.

Very respectfully, your obedient servant,

EDMUND L. JUDSON, 2d,

Colonel and A. D. C., Paymaster.

(H.)

REPORT OF THE GENERAL INSPECTOR OF RIFLE PRACTICE FOR 1888.

STATE OF NEW YORK:

DEPARTMENT OF RIFLE PRACTICE, OFFICE No. 8 COENTIES SLIP, }
NEW YORK CITY, *December 31, 1888.* }

The Adjutant-General, State of New York:

SIR.—In making the annual report of this department, I am glad to say the interest in the duty seems to increase, especially among the rank and file, which is shown by the increase in number practicing of 624, as compared with 1887.

I regret to say the lack of interest on the part of officers, especially of the line, accounts in a great degree for the large number of absentees, viz.: 4,684 out of a total of 12,622 inspected.

The loss of 110 in number of marksmen is not a discouraging feature, and the increase in number practicing in volley and skirmish is very encouraging, the effort having been to have every man taught something rather than waste time and strength that a few may become experts.

The "free practice" instituted in 1887 has been extended so as to cover the separate companies, but I am sorry to say, except in case of the Third, Eighteenth and Twentieth, and Sixth Battery, but little effort was made to benefit by it. At Creedmoor about 800 men, at Bay View 250 (quite an increase), participated.

This practice, besides offering inducements to all to practice, was especially intended for instruction, and yet in the First and Second Brigades less than twenty officers availed themselves of it.

I still believe in the continuance of this practice, and gradually the results will show beneficially. Following is the

STATE FIGURE OF MERIT.	4,618 Marksmen x 100=461,800		
	2,141 1st Class x 60=128,580		
	1,177 2d Class x 20= 23,540		
	4,684 3d Class		
	<hr/>		
	12,620		
	<u>Inspected..</u>	12,620)613,920(	Individual figure of merit 48.64
	5,494 Volley and skirmish,5,461		
	<hr/>		
	Actual		
Possible. score.			
<hr/>			
5,477½ Men x 25 136,937½)717,125(
Figure merit, volley and skirmish, 52.37			
<hr/>			
Total..... 101.01			
<hr/>			
Number practicing, 7,938, general figures (or ½), is..... 50.51			
<hr/>			

PROFICIENCY TABLES.

BY BRIGADES.

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
1	Third	2,487	1,663	1,102	402	159	824	56.96	55.29	56.13
2	Fourth	1,891	1,238	723	393	122	653	58.39	51.99	55.19
3	Second	2,934	1,993	1,124	561	308	941	48.21	51.90	50.05
4	First	5,285	3,019	1,646	795	588	2,266	49.43	42.28	45.86

BY REGIMENTS.

1	Seventh Regiment	1,029	1,029	919	85	25	.....	65.00	94.75	79.88
2	Twenty-third Regiment.	753	640	549	70	21	113	60.63	79.04	69.84
3	Sixty-fifth Regiment	454	292	212	65	15	162	61.17	55.95	58.56
4	Seventy-fourth Regt.	369	208	143	56	9	161	56.90	48.34	52.62
5	Forty-seventh Regiment	466	340	153	109	78	126	47.97	50.21	49.09
6	Tenth Battalion	253	151	96	34	21	102	49.04	47.67	48.36
7	Thirteenth Regiment....	683	480	220	180	80	203	46.03	50.36	48.20
8	Twenty-second Regt.	578	318	141	120	57	260	50.94	38.82	44.88
9	Twelfth Regiment	616	392	140	146	106	224	40.94	40.39	40.67
10	Ninth Regiment	613	323	143	108	72	290	43.27	36.25	39.76
11	Seventy-first Regiment..	538	294	96	99	99	244	40.63	32.56	36.59
12	Fourteenth Regiment ...	546	250	109	95	46	296	40.18	32.09	36.14
13	Eighth Regiment	413	206	61	75	70	207	40.44	29.05	34.75
14	Thirty-second Regiment	417	219	43	96	80	198	35.18	27.96	31.57
15	Sixty-ninth Regiment...	930	258	110	84	64	672	35.98	18.62	27.30
16	Eleventh Regiment.....	558	191	31	65	95	367	29.16	15.95	22.50

BY COMPANIES.

1	B, 7th Regiment	101	117	113	4	....	....	71.37	114.25	92.81
2	Ninth Separate	56	61	59	2	....	....	70.20	107.50	88.85
3	I, 7th Regiment	101	106	100	6	....	....	67.31	102.57	84.94
4	I, 23d Regiment	101	100	96	3	1	1	70.66	97.03	83.85
5	K, 7th Regiment	101	106	93	13	....	....	67.63	99.80	83.72
6	H, 7th Regiment	101	102	90	9	3	....	71.53	95.05	83.29
7	F, 7th Regiment	101	107	102	5	....	....	62.59	103.96	83.28
8	B, 23d Regiment	54	52	46	4	2	2	69.08	90.37	79.73
9	Thirty-ninth Separate ..	72	65	60	4	1	7	71.40	86.94	79.17
10	Twentieth Separate	76	76	60	15	1	....	67.21	91.05	79.13
11	D, 23d Regiment	50	50	37	12	1	....	67.12	88.80	77.96
12	G, 7th Regiment	101	102	90	7	5	....	59.27	94.26	76.77
13	E, 7th Regiment	101	98	87	9	2	3	60.69	91.88	76.29
14	Eighteenth Separate	64	50	46	2	2	14	78.21	74.37	76.29
15	Seventh Separate	73	71	67	2	2	2	57.25	93.97	75.61
16	A, 7th Regiment	101	92	77	15	....	9	65.70	85.15	75.43
17	Twenty-seventh Sep'tate,	60	54	45	7	2	6	67.84	82.66	75.25
18	C, 7th Regiment	101	92	84	4	4	9	63.84	86.33	75.09
19	Forty-second Separate ..	102	99	64	29	6	3	67.65	80.98	74.32
20	Thirty-second Separate.	80	69	67	2	....	11	63.17	85.25	74.21
21	Second Separate	97	89	72	14	3	8	64.00	83.50	73.75
22	Sixth Separate	102	91	69	20	2	11	65.37	79.80	72.59
23	C, 23d Regiment	70	59	51	8	....	11	62.15	79.71	70.93
24	Third Separate	91	81	54	26	1	10	64.66	76.70	70.68
25	Thirty-third Separate ...	69	60	42	13	5	9	67.70	73.62	70.66
26	Seventeenth Separate ...	59	55	41	11	3	4	59.55	81.70	70.63
27	A, 23d Regiment.....	101	88	77	8	3	13	58.56	81.58	70.07

BY COMPANIES — (Continued).

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
28	F, 74th Regiment.....	53	43	33	10	....	10	64.20	73.58	68.89
29	F, 23d Regiment.....	75	65	57	5	3	10	53.42	80.80	67.11
30	Thirtieth Separate.....	62	46	39	6	1	16	63.79	69.03	66.41
31	H, 23d Regiment.....	75	64	54	4	6	11	55.82	76.80	66.31
32	Twenty-first Separate...	77	71	56	9	6	6	50.61	81.30	65.96
33	I, 65th Regiment.....	56	41	27	12	2	15	68.12	61.78	64.95
34	D, 7th Regiment.....	101	89	67	12	10	12	54.07	75.44	64.76
35	F, 47th Regiment.....	51	45	29	12	4	6	56.11	72.55	64.33
36	A, 65th Regiment.....	66	44	40	3	1	22	62.85	63.63	63.24
37	D, 65th Regiment.....	53	41	33	4	4	12	57.87	68.30	63.09
38	Forty-third Separate....	80	76	30	30	16	4	59.29	64.00	61.65
39	K, 23d Regiment.....	90	64	55	8	1	26	56.18	66.66	61.42
40	Fourteenth Separate....	74	50	30	15	4	24	66.14	54.06	60.10
41	G, 23d Regiment.....	64	47	35	9	3	17	56.06	64.06	60.06
42	F, 65th Regiment.....	49	36	22	12	3	13	59.37	60.41	59.89
43	Twenty-third Separate..	74	52	38	12	2	22	57.91	61.62	59.77
44	First Separate.....	63	57	29	16	12	6	53.36	65.08	59.22
45	G, 65th Regiment.....	48	22	17	5	....	26	76.36	41.66	59.01
46	Thirty-fifth Separate...	69	68	38	21	9	1	41.32	75.94	58.63
47	B, 12th Regiment.....	44	34	17	10	7	10	61.37	55.45	58.41
48	Thirty-fourth Separate..	65	49	22	22	5	16	58.64	55.70	57.17
49	F, 13th Regiment.....	46	32	20	9	3	14	57.31	56.52	56.92
50	B, 74th Regiment.....	63	42	25	15	2	21	58.74	54.60	56.67
51	K, 47th Regiment.....	60	52	28	15	9	8	47.63	64.66	56.15
52	B, 10th Battalion.....	57	46	35	5	5	11	39.57	69.47	54.52
53	G, 13th Regiment.....	95	76	43	26	7	19	45.22	63.16	54.19
54	H, 65th Regiment.....	59	35	24	10	1	24	50.73	51.19	54.11
55	F, 22d Regiment.....	39	26	17	7	2	13	52.00	55.38	53.69
56	Tenth Separate.....	57	34	16	13	5	23	63.40	43.68	53.54
57	Eighth separate.....	68	39	25	10	4	29	59.71	46.77	53.24
58	A, 10th Battalion.....	67	45	26	8	11	22	56.56	49.25	52.91
59	Fourth Separate.....	83	61	38	16	7	22	46.41	59.03	52.72
60	Sixteenth Separate.....	62	35	18	13	2	27	59.86	44.20	52.03
61	A, 74th Regiment.....	51	34	19	13	2	17	50.66	53.33	52.00
62	B, 65th Regiment.....	54	30	22	8	....	24	54.33	49.63	51.98
63	B, 22d Regiment.....	76	50	30	15	5	26	51.13	52.63	51.88
64	E, 23d Regiment.....	55	33	24	8	1	22	50.66	52.73	51.70
65	C, 65th Regiment.....	51	28	16	9	3	23	60.10	43.14	51.62
66	G, 47th Regiment.....	68	46	22	14	10	22	55.46	47.65	51.56
67	Twenty-sixth Separate..	84	65	32	26	7	19	44.71	58.33	51.52
68	Thirty-eighth Separate..	58	31	16	15	....	27	57.33	43.10	50.22
69	E, 74th Regiment.....	53	22	20	2	....	31	60.00	40.00	50.00
70	E, 22d Regiment.....	89	49	17	26	6	40	61.07	38.00	49.54
71	I, 13th Regiment.....	50	40	16	16	8	10	44.60	54.40	49.50
72	I, 12th Regiment.....	46	18	7	9	2	28	71.15	27.83	49.49
73	D, 74th Regiment.....	43	22	18	4	....	21	50.36	47.44	48.90
74	B, 71st Regiment.....	54	33	19	9	5	21	49.94	47.04	48.49
75	D, 13th Regiment.....	48	31	16	11	4	17	48.21	48.75	48.48
76	K, 12th Regiment.....	40	29	12	13	4	11	44.44	51.50	47.97
77	I, 14th Regiment.....	50	27	20	7	....	23	46.80	48.40	47.60
78	Twenty-second Separate	92	83	32	20	31	9	39.93	54.56	47.25
79	B, 13th Regiment.....	55	40	12	18	10	15	49.41	45.09	47.25
80	A, 13th Regiment.....	60	46	17	15	14	14	46.21	48.00	47.11
81	F, 9th Regiment.....	48	26	15	7	4	22	51.26	41.66	46.46
82	K, 13th Regiment.....	77	66	26	24	16	11	35.54	56.62	46.08
83	Fifth Separate.....	98	59	19	28	12	39	52.82	39.00	45.91
84	Twenty-ninth Separate..	51	35	9	24	2	16	44.46	46.66	45.56
85	D, 47th Regiment.....	60	42	19	12	11	18	43.51	47.33	45.42
86	H, 13th Regiment.....	72	38	20	16	2	34	49.04	41.66	45.35
87	Eleventh Separate.....	58	42	15	16	11	16	42.95	46.21	44.58
88	H, 9th Regiment.....	56	32	16	12	4	24	46.23	42.86	44.55
89	E, 13th Regiment.....	98	56	22	26	7	42	47.90	40.81	44.36
90	D, 10th Battalion.....	52	17	12	4	1	35	60.64	28.08	44.36
91	I, 22d Regiment.....	49	24	7	17	....	25	53.37	35.10	44.24
92	C, 13th Regiment.....	63	39	15	16	8	24	46.73	41.59	44.16
93	G, 14th Regiment.....	53	22	11	9	2	31	56.48	31.70	44.09
94	Nineteenth Separate....	102	67	23	34	10	35	43.25	44.51	43.88
95	I, 9th Regiment.....	50	31	21	3	7	19	58.43	48.40	43.42
96	B, 9th Regiment.....	78	38	17	14	7	40	51.29	34.36	42.83

BY COMPANIES — (Continued).

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
97	F, 12th Regiment.....	59	46	14	20	12	13	37.50	48.13	42.82
98	A, 47th Regiment.....	49	30	11	9	10	19	48.00	37.55	42.78
99	I, 47th Regiment.....	66	49	14	21	14	17	40.60	44.54	42.57
100	C, 22d Regiment.....	50	28	9	13	6	22	49.11	36.00	42.56
101	E, 47th Regiment.....	48	30	8	13	9	18	48.38	36.66	42.52
102	G, 22d Regiment.....	48	29	13	9	7	19	43.54	41.25	42.40
103	K, 14th Regiment.....	53	35	9	20	6	18	42.77	41.88	42.33
104	Thirteenth Separate.....	96	57	12	37	8	39	46.99	37.29	42.14
105	C, 71st Regiment.....	56	30	15	13	2	26	42.70	41.43	42.07
106	C, 12th Regiment.....	61	33	12	16	11	22	44.16	39.01	41.59
107	Twelfth Separate.....	89	38	24	11	3	51	47.46	35.06	41.26
108	C, 10th Battalion.....	65	33	16	13	4	32	43.93	37.85	40.89
109	A, 14th Regiment.....	63	43	18	15	10	20	34.49	46.03	40.26
110	A, 22d Regiment.....	64	35	14	15	6	29	42.61	37.81	40.21
111	D, 12th Regiment.....	88	55	14	20	21	33	45.38	34.32	39.85
112	H, 22d Regiment.....	67	32	12	9	11	35	50.20	29.25	39.73
113	B, 47th Regiment.....	45	29	8	11	10	16	42.50	36.90	39.70
114	K, 22d Regiment.....	41	19	7	5	7	22	50.50	27.80	39.15
115	C, 69th Regiment.....	83	36	27	5	4	47	41.00	37.11	39.06
116	D, 22d Regiment.....	37	16	7	3	6	21	50.80	27.03	38.92
117	D, 9th Regiment.....	50	26	9	10	7	24	44.88	32.80	38.84
118	B, 14th Regiment.....	52	34	12	14	8	18	33.87	42.31	38.09
119	K, 71st Regiment.....	64	40	9	14	17	24	43.57	32.50	38.04
120	A, 32d Regiment.....	36	17	4	7	6	19	49.80	26.11	37.96
121	D, 32d Regiment.....	62	27	11	9	7	35	47.00	28.71	37.86
122	C, 8th Regiment.....	40	21	5	9	7	19	45.87	29.50	37.69
123	F, 9th Regiment.....	53	27	10	10	7	26	42.36	32.83	37.60
124	G, 12th Regiment.....	74	50	12	22	16	24	36.77	38.38	37.58
125	H, 71st Regiment.....	64	33	13	9	11	31	42.50	32.19	37.35
126	H, 14th Regiment.....	48	11	4	4	3	37	59.33	14.58	36.96
127	Thirty-sixth Separate.....	64	28	19	8	1	36	36.32	37.50	36.91
128	E, 9th Regiment.....	55	22	8	8	6	33	48.22	25.45	36.84
129	E, 8th Regiment.....	55	29	8	10	11	26	44.08	29.45	36.77
130	A, 71st Regiment.....	66	36	12	11	13	30	41.15	32.12	36.64
131	H, 8th Regiment.....	46	22	3	12	7	24	47.90	25.22	36.56
132	G, 74th Regiment.....	44	15	6	6	3	29	49.75	23.18	36.47
133	A, 69th Regiment.....	83	31	10	7	14	52	51.77	20.48	36.13
134	D, 71st Regiment.....	75	45	6	21	18	30	42.51	29.60	36.06
135	C, 9th Regiment.....	45	18	2	12	4	27	49.86	22.22	36.04
136	G, 8th Regiment.....	55	27	10	6	11	28	43.02	28.73	35.88
137	E, 12th Regiment.....	48	20	10	7	3	28	40.88	30.83	35.86
138	K, 9th Regiment.....	60	20	11	6	3	40	45.68	25.33	35.61
139	A, 12th Regiment.....	61	35	14	8	13	26	35.68	35.08	35.38
140	A, 9th Regiment.....	160	66	18	26	22	34	32.66	38.00	35.03
141	B, 32d Regiment.....	39	28	3	10	15	11	38.07	30.77	34.42
142	B, 8th Regiment.....	41	26	6	10	19	15	33.25	34.15	33.70
143	I, 71st Regiment.....	48	12	4	3	5	36	53.17	14.66	33.67
144	G, 32d Regiment.....	39	26	5	13	8	13	30.00	36.92	33.46
145	H, 12th Regiment.....	77	49	12	21	16	28	30.55	36.10	33.33
146	D, 8th Regiment.....	57	28	8	10	10	29	37.86	28.07	32.97
147	G, 69th Regiment.....	94	23	8	12	3	71	48.28	16.80	32.54
148	I, Eighth Regiment.....	52	29	10	8	11	23	32.08	32.69	32.39
149	Fortieth Separate.....	65	38	5	22	11	27	33.13	31.38	32.26
150	C, 14th Regiment.....	48	18	9	4	5	30	38.44	25.83	32.14
151	K, 69th Regiment.....	89	26	13	12	1	63	40.00	22.92	31.46
152	C, 74th Regiment.....	43	18	11	5	2	25	28.88	33.49	31.19
153	K, 32d Regiment.....	28	16	.....	8	8	12	39.25	22.86	31.06
154	F, 8th Regiment.....	50	13	3	4	3	37	44.00	15.60	29.80
155	C, 11th Regiment.....	68	30	4	12	14	38	38.72	20.58	29.65
156	Fifteenth Separate.....	63	24	3	16	5	39	36.48	21.58	29.03
157	C, 32d Regiment.....	56	24	3	13	8	32	32.69	22.14	27.42
158	F, 32d Regiment.....	48	32	3	33	16	16	25.33	29.17	27.25
159	I, 32d Regiment.....	40	12	2	8	2	28	36.50	18.00	27.25
160	F, 69th Regiment.....	93	27	9	9	9	66	35.57	17.42	26.60
161	F, 11th Regiment.....	42	16	5	1	10	26	34.77	18.10	26.44
162	Thirty-seventh Separate.....	69	48	22	22	4	21	.....	52.17	26.09
163	F, 71st Regiment.....	56	33	5	10	18	23	25.66	26.07	25.87
164	D, 14th Regiment.....	66	23	9	8	6	43	28.95	22.73	25.84
165	A, 11th Regiment.....	86	20	3	9	8	66	37.63	11.63	24.63

BY COMPANIES — (Continued).

Order of merit.	ORGANIZATIONS.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
166	G, 71st Regiment.....	37	19	4	5	10	18	24.70	24.52	24.51
167	E, 69th Regiment.....	101	15	5	5	5	86	40.75	8.91	24.83
168	L, 11th Regiment.....	63	17	3	5	9	46	36.55	12.38	24.47
169	Sixth Battery.....	68	43	24	13	6	25	.....	48.53	24.27
170	H, 69th Regiment.....	100	24	10	9	5	76	30.25	16.40	23.33
171	K, 11th Regiment.....	51	23	2	11	10	28	25.64	20.78	23.21
172	H, 32d Regiment.....	50	19	2	9	8	31	28.00	18.00	23.00
173	B, 69th Regiment.....	90	31	9	8	14	59	27.20	18.44	22.82
174	B, 11th Regiment.....	73	29	6	6	17	44	24.00	17.81	20.91
175	H, 11th Regiment.....	47	8	.....	5	3	39	33.60	7.66	20.63
176	Thirty-first Separate....	65	30	21	6	3	36	.....	38.77	19.39
177	L, 69th Regiment.....	78	13	6	4	3	65	24.00	11.54	17.77
178	D, 69th Regiment.....	100	21	5	10	6	79	21.64	12.20	16.92
179	D, 11th Regiment.....	67	22	2	6	14	45	19.43	12.54	15.99
180	Forty-first Separate....	75	47	5	19	23	28	.....	28.00	14.00
181	F, 14th Regiment.....	46	17	5	6	6	29	.....	21.30	10.65
182	G, 11th Regiment.....	47	12	2	1	9	35	11.33	9.36	10.35
183	E, 14th Regiment.....	50	12	5	7	.....	38	.....	18.40	9.20
184	Twenty-fourth Separate..	73	.....	.....	.....	.....	73	No	prac	tice.
185	Twenty-fifth Separate....	31	.....	.....	.....	.....	31	No	prac	tice.
186	Twenty-eighth Separate..	71	.....	.....	.....	.....	71	No	prac	tice.
187	Forty-fourth Separate....	73	.....	.....	.....	.....	73	No	prac	tice.
188	Forty-fifth Separate.....	61	1	1	.....	.....	60	No	prac	tice.

I inclose a list of those who, retaining their membership in the service, have qualified for FOURTEEN successive years; also, the names of those winning the silver or sharpshooters' bar.

MARKSMEN

Who have qualified for fourteen consecutive years.

Number.	Rank.	NAME.	Organization.	200 yds.		Total.
				200 yds.	500 yds.	
1	Ord. Sergeant.	T. J. Dolan.....	Twelfth Regiment.....	25	25	50
2	Captain.....	Ezra DeForest.....	Twenty-third Regiment.....	22	25	47
3	Sergeant.....	A. B. Van Heusen....	Twelfth Regiment.....	23	24	47
4	First Lieut....	G. W. Rand.....	Seventh Regiment.....	22	22	44
5	Ord. Sergeant.	C. E. Bryant.....	Twenty-third Regiment.....	22	22	44
6	Private.....	M. P. Ross.....	Eighth Regiment.....	22	22	44
7	Lieutenant....	C. E. Kohlberger.....	Ninth Regiment.....	20	23	43
8	.....	J. B. Holland.....	Seventh Regiment.....	20	23	43
9	Lieut.-Colonel.	J. B. Frothingham....	A. A. G., Second Brigade....	21	22	43
10*	Captain.....	J. C. Abrams.....	Seventh Regiment.....	20	22	42
11	Captain.....	W. L. Candee.....	Twenty-third Regiment.....	20	22	42
12	Lieut.-Colonel.	F. C. McLewee.....	A. I. G. S. N. Y.....	21	21	42
13	Major.....	Edward Duffey.....	Sixty-ninth Regiment.....	21	21	42
14	Private.....	N. D. Ward.....	Ninth Regiment.....	19	21	40
15	Captain.....	H. Nutt.....	Fourteenth Regiment.....	18	20	38
16	Colonel.....	G. D. Scott.....	Eighth Regiment.....	20	18	38
17	Captain.....	W. H. Murphy.....	Twelfth Regiment.....	18	17	35
18	Captain.....	Edward Barker.....	Eighth Regiment.....	18	17	35
19	Captain.....	W. J. Collins.....	Thirteenth Regiment.....	20	14	34
20	Captain.....	J. I. Pruyn.....	Fourth Separate Company....	22	12	34
21	Colonel.....	E. A. Rockwood.....	Supernumerary officer.....	18	14	32
22	Sergt.-Major..	T. B. Coughtry.....	Seventh Regiment.....	19	13	32
23	Ord. Sergeant.	T. R. Murphy.....	Eighth Regiment.....	17	14	31
24	Captain.....	A. G. Brown.....	Forty-seventh Regiment.....	14	14	28
25	Colonel.....	J. G. Story.....	Ordnance department.....	18	10	28
26	Private.....	W. A. French.....	Seventh Regiment.....	15	10	25

SHARPSHOOTERS.

Those who have made scores of forty-two and upwards.

Number.	Rank.	NAME.	Organization.	200 yards.	500 yards.	Total.
1	Ord. Sergeant.	T. J. Dolan	Twelfth Regiment.....	25	25	50
2	Private	H. T. Lockwood	Seventh Regiment.....	24	25	49
3	Corporal.....	John F. Klein	Seventeenth Separate Comp'y.	23	25	48
4	Lieut.-Colonel.	W. E. Fitch	Tenth Battalion.....	23	25	48
5	Private	G. S. Scott	Twenty-third Regiment	23	25	48
6	Q. M. Sergeant.	F. J. Stewart	Sixty-ninth Regiment.....	23	25	48
7	Major	C. H. Gaus	I. R. P. Third Brigade.....	22	25	47
8	Private	C. A. Jones	Seventh Regiment.....	22	25	47
9	Captain	Ezra De Forest	Twenty-third Regiment.....	22	25	47
10	Sergeant	F. A. Wells	Twenty-third Regiment.....	22	25	47
11	Private	D. H. Ogden	Twentieth Separate Company.	22	25	47
12	Ord. Sergeant.	J. I. Miles	Tenth Battalion.....	22	25	47
13	Private	J. C. Brewster.....	Forty-second Separate Comp'y.	22	25	47
14	Private	C. Pratt	Forty-second Separate Comp'y.	22	25	47
15	Sergeant	W. J. Underwood	Seventh Regiment.....	23	24	47
16	First Sergeant.	W. B. Stevens	Eighteenth Separate Company.	23	24	47
17	First Lieut	John S. Shepherd.....	Twenty-third Regiment.....	23	24	47
18	Private	A. Stein	Seventh Regiment.....	23	24	47
19	Captain	James S. Garrett.....	Eighteenth Separate Company.	23	24	47
20	Private	J. D. Foot	Seventh Regiment.....	23	24	47
21	Sergeant	A. B. Van Heusen.....	Twelfth Regiment.....	23	24	47
22	Captain	W. H. Palmer	Seventh Regiment.....	24	23	47
23	Corporal.....	T. A. Brown	Thirtieth Separate Company.	24	23	47
24	First Lieut	E. C. Smith	Twelfth Regiment.....	21	25	46
25	Second Lieut..	G. F. Hamlin.....	Twenty-third Regiment.....	21	25	46
26	Private	T. G. Austin	Thirteenth Regiment.....	21	25	46
27	Captain	F. L. Holmes	Twenty-third Regiment.....	22	24	46
28	First Lieut	W. W. Pickett	Twenty-third Regiment.....	22	24	46
29	First Sergeant	W. A. Stokes	Twenty-third Regiment.....	22	24	46
30	Sergeant	H. De W. Hamilton.....	Twenty-third Regiment.....	22	24	46
31	Corporal.....	E. O. Babcock	Forty-second Separate Comp'y	22	24	46
32	Corporal.....	T. W. Hislop	Sixth Separate Company.....	22	24	46
33	Private	George Ball	Twenty-third Regiment.....	22	24	46
34	Private	O. E. Dudley	Seventh Regiment.....	22	24	46
35	Private	H. de Long	Twenty-first Separate Comp'y.	22	24	46
36	Private	S. Schreiber	Tenth Battalion	22	24	46
37	Private	G. L. Stebbins	Seventh Regiment.....	22	24	46
38	Captain	E. V. Denison	Tenth Battalion	23	23	46
39	Captain	C. L. Lindley	Twelfth Regiment.....	23	23	46
40	First Sergeant	C. H. Hitchcock.....	Twentieth Separate Company.	23	23	46
41	Private	F. Davis	Eighteenth Separate Company	23	23	46
42	Private	J. E. McNichol	Seventh Regiment.....	23	23	46
43	Private	C. W. Simmons	Twenty-third Regiment.....	23	23	46
44	Private	G. L. Hoffman	Seventh Regiment.....	24	22	46
45	Private	G. W. Lotz	Thirteenth Regiment	25	21	46
46	First Lieut	Richard Oliver.....	Twenty-third Regiment.....	20	25	45
47	Private	G. W. Happy	Seventh Regiment.....	20	25	45
48	Private	Samuel Monroe.....	Twelfth Regiment.....	20	25	45
49	Colonel.....	P. P. Beals	Dept. Rifle Practice	21	24	45
50	Captain	A. C. Saunders.....	Twenty-third Regiment.....	21	24	45
51	First Lieut	John C. Leonard.....	Eighteenth Separate Company	21	24	45
52	First Lieut	B. C. Senton	Ninth Separate Company	21	24	45
53	First Sergeant.	A. McDougall	Seventh Regiment.....	21	24	45
54	Corporal.....	J. N. Munson	Seventh Regiment.....	21	24	45
55	Private	W. A. Bryant	Seventh Regiment.....	21	24	45
56	Corporal.....	W. G. Kimball	Twenty-third Regiment.....	21	24	45
57	Private	R. M. Kalloch	Seventh Regiment.....	21	24	45
58	Private	A. G. Scranton	Seventh Regiment.....	21	24	45
59	Private	E. F. M. Wendelstadt.	Twenty-third Regiment	21	24	45
60	Brig'adier-Gen.	C. F. Robbins	G. I. R. P. S., N. Y.....	22	23	45
61	Captain	W. Content	Twelfth Regiment.....	22	23	45
62	First Lieut	F. B. Streeter	Eighteenth Separate Company	22	23	45
63	Second Lieut..	W. N. Bavier	Twenty-second Regiment.....	22	23	45
64	Second Lieut..	J. M. Macconnell.....	Ninth Regiment	22	23	45
65	Quartm. Serg't	O. W. Vate	Twenty-second Regiment.....	22	23	45
66	Sergeant	G. E. Constable	Thirteenth Regiment.....	22	23	45
67	Sergeant	G. A. Lane	Thirteenth Regiment.....	22	23	45
68	Corporal.....	W. A. Dixon	Seventh Regiment.....	22	23	45
69	Corporal.....	R. M. Dunn	Seventh Regiment.....	22	23	45
70	Corporal.....	A. W. Trotter	Seventh Regiment.....	22	23	45

SHARPSHOOTERS — (Continued).

Number.	Rank.	NAME.	Organization.	200 yards.	500 yards.	Total.
71	Private.	McCoskry Butt.	Seventh Regiment.	22	23	45
72	Private.	C. T. Boardman.	Ninth Separate Company.	22	23	45
73	Private.	J. W. Cochran.	Seventh Regiment.	22	23	45
74	Private.	G. P. Hilton.	Tenth Battalion.	22	23	45
75	Captain.	John Macauley.	Twelfth Regiment.	22	23	45
76	Second Lieut.	C. A. Anderson.	Fourteenth Regiment.	23	22	45
77	Ord. Sergeant.	J. M. Garratt.	Seventy-fourth Regiment.	23	22	45
78	First Sergeant.	D. E. McLean.	Thirty-third Separate Comp'y.	23	22	45
79	Corporal.	A. H. Rennie.	Tenth Battalion.	23	22	45
80	Corporal.	W. A. Bayer.	Twenty-third Regiment.	23	22	45
81	Private.	A. Bevier.	Twentieth Separate Company.	23	22	45
82	Captain.	J. G. Van Etten.	Fourteenth Separate Company.	20	24	44
83	Second Lieut.	J. T. Hall.	Twenty-third Regiment.	20	24	44
84	Quartm. Serg't.	H. B. Thomson.	Seventh Regiment.	20	24	44
85	Sergeant.	A. L. Ely.	Seventh Regiment.	20	24	44
86	Private.	D. Bacon.	Seventh Regiment.	20	24	44
87	Private.	J. M. Carrere.	Twenty-third Regiment.	20	24	44
88	Private.	J. J. Trevan.	Thirteenth Regiment.	20	24	44
89	Private.	G. C. Whaley.	Seventh Regiment.	20	24	44
90	Captain.	N. B. Thurston.	Twenty-second Regiment.	21	23	44
91	Captain.	H. C. Brown.	Twenty-third Regiment.	21	23	44
92	Second Lieut.	S. W. Merritt.	Seventh Regiment.	21	23	44
93	Quartm. Serg't.	F. R. Hickman.	Seventy-fourth Regiment.	21	23	44
94	Quartm. Serg't.	H. G. Morris.	Thirteenth Regiment.	21	23	44
95	Sergeant.	J. S. Boyce.	Thirty-ninth Separate Comp'y.	21	23	44
96	Corporal.	E. V. Howard.	Twenty-third Regiment.	21	23	44
97	Corporal.	S. J. Murphy.	Twenty-second Regiment.	21	23	44
98	Private.	J. M. Brooks.	Twenty-third Regiment.	21	23	44
99	Private.	G. U. Dixon.	Seventh Regiment.	21	23	44
100	Private.	H. F. Floyd.	Seventy-fourth Regiment.	21	23	44
101	Private.	J. W. Halstead.	Seventh Regiment.	21	23	44
102	Private.	C. E. Hinds.	Twentieth Separate Company.	21	23	44
103	Private.	F. S. Kennedy.	Seventh Regiment.	21	23	44
104	Private.	E. Lockley.	Twelfth Regiment.	21	23	44
105	Private.	W. W. Martin.	Seventh Regiment.	21	23	44
106	Private.	G. H. Salt.	Forty-second Separate Comp'y.	21	23	44
107	Private.	C. M. Underwood.	Tenth Battalion.	21	23	44
108	Major.	G. L. Fox.	I. R. P. Second Brigade.	22	22	44
109	Major.	C. E. De La Vergne.	Supernumerary.	22	22	44
110	Captain.	W. M. Kirby.	Second Separate Company.	22	22	44
111	Captain.	T. A. Paterson.	Ninth Separate Company.	22	22	44
112	First Lieut.	G. W. Rand.	Seventh Regiment.	22	22	44
113	First Lieut.	John Ratcliff.	Sixty-fifth Regiment.	22	22	44
114	Sergt.-Major.	A. D. Beeken.	Twenty-third Regiment.	22	22	44
115	Q. M. Sergt.	B. R. Spellman, Jr.	Tenth Battalion.	22	22	44
116	Ord. Sergt.	C. E. Bryant.	Twenty-third Regiment.	22	22	44
117	First Sergt.	E. L. Gager.	Seventy-fourth Regiment.	22	22	44
118	Sergeant.	C. W. Beers.	Thirty-third Separate Comp'y.	22	22	44
119	Corporal.	P. L. Kloch.	Seventh Regiment.	22	22	44
120	Private.	L. J. Elliott.	Twenty-third Regiment.	22	22	44
121	Private.	E. E. Philpott.	Forty-second Separate Co.	22	22	44
122	Private.	M. P. Ross.	Eighth Regiment.	22	22	44
123	Captain.	J. W. Hale.	Eleventh Regiment.	23	21	44
124	Private.	H. R. Palmer.	Thirty-second Separate Co.	23	21	44
125	Private.	F. W. Perkins.	Seventh Regiment.	24	20	44
126	Private.	C. Hartman.	Eighteenth Separate Co.	18	25	43
127	Colonel.	J. H. Jones.	Twelfth Regiment.	19	24	43
128	First Sergt.	Robert McLean.	Seventh Regiment.	19	24	43
129	Corporal.	S. F. Farnestock.	Thirteenth Regiment.	19	24	43
130	Private.	Robert Byars.	Twenty-second Regiment.	19	24	43
131	Private.	H. E. Chapman.	Seventh Regiment.	19	24	43
132	Private.	F. W. Collins.	Seventh Separate Co.	19	24	43
133	Private.	H. M. Field.	Twenty-third Regiment.	19	24	43
134	Private.	H. W. Janssen.	Seventh Regiment.	19	24	43
135	Private.	C. C. Myer.	Forty-seventh Regiment.	19	24	43
136	Colonel.	John Bodine.	Asst. G. I. R. P.	20	23	43
137	First Lieut.	Phil. Fogarty.	Sixty-fifth Regiment.	20	23	43
138	First Lieut.	C. E. Kohlberger.	Ninth Regiment.	20	23	43
139	First Lieut.	L. W. Pettibone.	Forty-second Separate Co.	20	23	43
140	First Lieut.	A. E. Schuman.	Twelfth Regiment.	20	23	43
141	Second Lieut.	T. T. Haviland.	Tenth Separate Company.	20	23	43
142	Sergt.-Major.	Aug. Kingsland.	Twelfth Regiment.	20	23	43
143	Ord. Sergt.	Jas. McNevin.	Thirteenth Regiment.	20	23	43

SHARPSHOOTERS — (Continued).

Number.	Rank.	NAME.	Organization.	200 yards.	500 yards.	Total.
144	First Sergt.	W. L. Frost	Twelfth Regiment	20	23	43
145	First Sergt.	J. B. Holland	Seventh Regiment	20	23	43
146	Q. M. Sergt.	J. F. Foote	Fourteenth Regiment	20	23	43
147	Sergeant	M. E. Burnton	Twenty-second Regiment	20	23	43
148	Sergeant	E. A. Lockwood	Seventy-fourth Regiment	20	23	43
149	Sergeant	W. W. Storr	Twentieth Separate Company	20	23	43
150	Corporal	Geo. Baker	Forty-second Separate Co.	20	23	43
151	Private	S. C. Pirie	Twenty-third Regiment	20	23	43
152	Private	Robert Sinclair	Forty-second Separate Co.	20	23	43
153	Private	G. E. Tolley	Sixteenth Separate Co.	20	23	43
154	Lieut.-Colonel	J. B. Frothingham	A. A. G., Second Brigade	21	22	43
155	Captain	A. W. Conover	Seventh Regiment	21	22	43
156	First Lieut.	G. J. Greene	Tenth Battalion	21	22	43
157	Corporal	R. Darling	Seventh Regiment	21	22	43
158	Corporal	A. Dorval	Ninth Separate Company	21	22	43
159	Corporal	J. N. Carlisle	Thirty-ninth Separate Co.	21	22	43
160	Corporal	F. I. Perry	Twenty-third Regiment	21	22	43
161	Private	A. R. Angell	Seventh Regiment	21	22	43
162	Private	T. M. Congdon	Twentieth Separate Company	21	22	43
163	Private	Jos. Edwards	Thirtieth Separate Company	21	22	43
164	Private	D. Rickoff	Forty-second Separate Co.	21	22	43
165	Private	J. E. Smith	Tenth Battalion	21	22	43
166	Private	W. J. Savage	Twentieth-third Regiment	21	22	43
167	Captain	J. M. Swanson	Sixty-fifth Regiment	22	21	43
168	First Lieut.	C. C. Wallace	Fourteenth Regiment	22	21	43
169	First Lieut.	D. S. Burr	Twentieth Separate Company	22	21	43
170	Sergeant	F. C. Deveau	Forty-second Separate Co.	22	21	43
171	Corporal	J. A. Ward	Sixty-fifth Regiment	22	21	43
172	Private	R. M. Townsend, Jr.	Sixth Separate Company	22	21	43
173	Private	W. W. Richey	Thirty-ninth Separate Co.	22	21	43
174	Private	A. T. Weston	Twenty-second Regiment	22	21	43
175	Q. M. Sergt.	W. H. Henry	Seventh Separate Company	23	20	43
176	First Lieut.	O. H. Smith	Seventy-first Regiment	18	24	42
177	Sergeant	F. B. Brown	Eighteenth Separate Co.	18	24	42
178	Private	W. L. Easson	Thirteenth Regiment	18	24	42
179	Private	W. F. Lenshuer	Seventy-fourth Regiment	18	24	42
180	Private	J. E. Stephens	Seventh Separate Company	18	24	42
181	First Lieut.	J. F. Long	Seventh Regiment	19	23	42
182	Second Lieut.	E. A. Smith	Sixty-fifth Regiment	19	23	42
183	First Sergt.	H. H. Treadwell	Twenty-second Regiment	19	23	42
184	Sergeant	J. H. Cockburn	Twelfth Regiment	19	23	42
185	Sergeant	Jas. Roach	Tenth Battalion	19	23	42
186	Sergeant	F. Van Lennep	Seventh Regiment	19	23	42
187	Corporal	J. W. Cleveland	Seventh Regiment	19	23	42
188	Corporal	A. H. Paul	Seventy-first Regiment	19	23	42
189	Private	A. Z. Bowen	Twenty-second Regiment	19	23	42
190	Private	L. A. Boor	Forty-second Separate Comp'y	19	23	42
191	Private	F. M. Greenough	Ninth Separate Company	19	23	42
192	Private	W. J. Limerick	Twelfth Separate Company	19	23	42
193	Private	H. Niklewicz	Sixteenth Separate Company	19	23	42
194	Captain	J. C. Abrams	Seventh Regiment	20	22	42
195	Captain	W. L. Candee	Twenty-third Regiment	20	22	42
196	Captain	C. H. Hoyt	Seventy-first Regiment	20	22	42
197	Second Lieut.	A. W. La Rose	Tenth Battalion	20	22	42
198	First Sergeant	R. Wahlstedt	Sixty-fifth Regiment	20	22	42
199	Q. M. Sergeant	M. W. Stickney	Tenth Battalion	20	22	42
200	Sergeant	H. P. Fowler	Twenty-third Regiment	20	22	42
201	Sergeant	J. C. Kane	Twenty-second Regiment	20	22	42
202	Sergeant	J. A. McConnell	Thirty-ninth Separate Comp'y	20	22	42
203	Sergeant	T. A. Pine	Thirty-third Separate Comp'y	20	22	42
204	Corporal	E. W. Band	Twenty-first Separate Comp'y	20	22	42
205	Corporal	F. T. Cooke	Twenty-third Regiment	20	22	42
206	Private	C. H. S. Jaffray	Twenty-third Regiment	20	22	42
207	Private	George Lull	Twelfth Separate Company	20	22	42
208	Private	E. R. Richards	Seventh Regiment	20	22	42
209	Private	J. E. Winslow	Twenty-third Regiment	20	22	42
210	Lieut.-Colonel	F. C. McLeewee	Inspector-General's Dept.	21	21	42
211	Major	Edw. Duffy	Sixty-ninth Regiment	21	21	42
212	Captain	John Kerr	Sixty-ninth Regiment	21	21	42
213	Q. M. Sergeant	L. W. Finch	Ninth Separate Company	21	21	42
214	Sergeant	R. M. Adams	Ninth Separate Company	21	21	42
215	Sergeant	C. S. Byington	Tenth Battalion	21	21	42
216	Sergeant	W. A. Robinson	Twenty-third Regiment	21	21	42

SHARPSHOOTERS — (*Continued*).

Number.	Rank.	NAME.	Organization.	200 yards.		Total.
				200 yards.	500 yards.	
217	Sergeant	D. Valentine, Jr.	Seventh Regiment	21	21	42
218	Sergeant	B. Willis	Thirty-second Separate Co.	21	21	42
219	Corporal	J. G. Anderson	Sixty-fifth Regiment	21	21	42
220	Corporal	G. F. Gonyan	Seventeenth Separate Comp'y.	21	21	42
221	Private	L. Boudrias, Jr.	Seventh Separate Company.	21	21	42
222	Private	D. W. Bugel	Twenty-third Separate Co.	21	21	42
223	Private	J. M. Comerford	Sixty-ninth Regiment	21	21	42
224	Private	P. Finnegan	Sixty-ninth Regiment	21	21	42
225	Private	R. Findlay	Twenty-third Regiment	21	21	42
226	Private	F. A. Locher	Forty-second Separate Comp'y	21	21	42
227	Private	J. P. M. Richards	Seventh Regiment	21	21	42
228	Private	H. H. Spies	Seventh Regiment	21	21	42
229	First Lieut.	G. A. Williams	Twenty-third Regiment	22	20	42
230	Sergeant	F. G. Musson	Twenty-third Regiment	22	20	42
231	Corporal	C. E. Graff	Twenty-third Regiment	22	20	42
232	Private	H. S. Bartow	Seventh Regiment	22	20	42
233	Corporal	F. A. Rich	Thirty-second Separate Co.	23	19	42

During the fall meeting of the National Rifle Association at Creedmor, September 10 to 15, 1888, matches for the various prizes offered by the State were shot as usual; also at Rensselaerwyck and Bay View, as follows:

State Match.

Prize, bronze figure, "The Gaul." Value, \$300. Competed for by teams from the Seventh, Twelfth, Thirteenth, Twenty-second and Twenty-third Regiments, and won by the Twenty-third Regiment team.

REGIMENT.	SCORE AT		Total.
	200 yards.	500 yards	
Twenty-third Regiment	252	269	521
Seventh Regiment.	236	259	495
Thirteenth Regiment	236	248	484
Twelfth Regiment.	237	245	482
Twenty-second Regiment.	227	224	451

The First Brigade Match.

Prize, bronze figure, "Iron Age." Value, \$100. Won by team of Twelfth Regiment, with score of 485.

REGIMENT.	200 yards.	500 yards.	Total.
Twelfth Regiment	233	252	485
Seventh Regiment.	238	234	472
Twenty-second Regiment	223	218	441

The Second Brigade Match.

Prize, bronze figure, "Gallic Chief." Value, \$100. Was won by team from the Twenty-third Regiment, with a score of 509.

REGIMENT.	200 yards.	500 yards.	Total.
Twenty-third Regiment	242	267	509
Thirteenth Regiment	228	229	457

The Third Brigade Match.

Prize, bronze figure, "The Armorer." Value, \$100. Was held at Rensselaerwyck and won by team from the Twentieth Separate Company (teams of six men) :

TEAM.	200 yards.	500 yards.	Total.
Twentieth Separate Company.....	118	117	235
Tenth Battalion	112	101	213
Eighteenth Separate Company....	109	94	203

The Fourth Brigade Match.

Prize, bronze figure, "The Archer." Value, \$100. Was held at Bay View and won by team from the Forty-second Separate Company (teams of six men) :

TEAM.	200 yards.	500 yards.	Total.
Forty-second Sep. Co. (first team) .	115	126	241
Thirtieth Separate Company.....	103	103	206
Forty-second Sep. Co. (second team)	107	88	195
Co. F, Sixty-fifth Regiment	96	83	171
Co. B, Seventy-fourth Regiment ..	103	68	171

A team was made up from only available members on the ground, to compete for the State prize, against a team from Massachusetts, and in the Hilton trophy match with teams from Massachusetts and the United States army, with result as follows:

Interstate Trophy.

TEAM.	200 yards.	500 yards.	Total.
Massachusetts	519	528	1,047
New York State	498	517	1,015

Hilton Trophy.

TEAM.	200 yards.	500 yards.	600 yards.	Total.
Massachusetts	359	375	346	1,080
Division of Atlantic, U. S. A.	351	373	333	1,057
New York State.....	351	375	331	1,057

Whether true or not, the idea that our troops are handicapped by the use of the fifty caliber makes it very difficult to get men to enter these matches.

The following companies stand highest in their brigades in general figure of merit :

First Brigade, Company B, Seventh Regiment, G. F. M. . . . 92.81
 Second Brigade, Company I, Twenty-third Regiment,
 G. F. M. 83.85
 Third Brigade, Ninth Separate Company, G. F. M. 88.85
 Fourth Brigade, Forty-second Separate Company, G. F. M. 74.32
 and are each entitled to a prize valued at fifty (\$50) dollars.

Notable mention should be made of the Seventh, Eighteenth, Twentieth, Twenty-seventh, Thirty-second and Thirty-ninth Separate Companies and Companies A, C, E, F, G, H, I and K of the Seventh Regiment, and Companies B and D of the Twenty-third Regiment, each of which has a figure of merit of over seventy-four per cent, while the Twenty-eighth and Forty-fourth Separate Companies are content to remain behind the procession, *dead*.

RANGES.

For specific account regarding these I would respectfully refer to letter accompanying, marked "A."

RECOMMENDATIONS.

As new armories are being erected the need of armory ammunition or material for same becomes more apparent.

The generous issue of transportation and ammunition this year has had good effect. I certainly would advise the same policy in the future.

The outlook for this part of a national guardsman's duty is good. A little more study and interest will develop it largely,

though with the limited time at our disposal we must go slow in attempts towards forcing.

The efforts of the various inspectors of rifle practice have been appreciated, and I would especially commend the duty performed by Colonel P. P. Beals, assistant in the department of rifle practice, and Major C. H. Gaus, Inspector of Rifle Practice, Third Brigade. These officers have given much time and ability to the service.

I am, sir,

Very respectfully yours.

CHAS. F. ROBBINS,

Brigadier-General and General Inspector Rifle Practice, S. N. Y.

“ A.”

STATE OF NEW YORK:

DEPARTMENT OF RIFLE PRACTICE, OFFICE NO. 8 COENTIES SLIP, }
NEW YORK CITY, *December 31, 1888.* }

The Adjutant-General, State of New York:

SIR.—The various ranges throughout the State have been visited as required by law during the year 1888.

CREEDMOOR.

About 5,200 men have practiced here under orders and 800 in free practice, including the First and Second Brigades and Fourth and Eleventh Separate Companies. About 8,200 men are entitled to use this range.

It is in fair condition. East pit needs some slight repairs; west butt and pit are badly decayed, in fact unsafe. As this portion of the land is leased, terminating December 31, 1888, nothing has been done to it this year except as necessity compelled. A movement now in progress, whereby the State may acquire this range, should be a success.

First Separate Company,

Penn Yan. Range in good shape; well cared for.

Second Separate Company,

Auburn. A good new range and in good order.

Third Separate Company,

Oneonta. Range good; butt worn out; should have thorough repairs.

Fourth Separate Company,

Yonkers, practices at Creedmoor.

Fifth Separate Company,

Newburgh. Range and butts good. Five hundred yards firing point should be rebuilt.

Sixth Separate Company,

Troy, practices at Rensselaerwyck. (See Tenth Battalion.)

Seventh Separate Company,

Cohoes, practices at Rensselaerwyck. (See Tenth Battalion.)

Eighth Separate Company,

Rochester. In fairly good shape. The owner of the land should make needed repairs to mound; small amount:

Ninth Separate Company,

Whitehall. This company have obtained new lease of life and this year show it by renewed care of range and butt; in fair order.

Tenth Separate Company,

Newburgh. (See Fifth Separate Company.)

Eleventh Separate Company,

Mount Vernon, practices at Creedmoor.

Twelfth Separate Company,

Troy, practices at Rensselaerwyck. (See Tenth Battalion.)

Thirteenth Separate Company,

Jamestown, have a new range; butt and targets erected this year.

Fourteenth Separate Company,

Kingston. Range and butts in good order.

Fifteenth Separate Company,

Poughkeepsie. Range needs repair at firing points; butts in good shape, well looked after; in charge of commanding officer Nineteenth Separate Company.

Sixteenth Separate Company,

Catskill, has new range, butts and targets. Company make good use of same.

Seventeenth Separate Company,

Flushing, practices at Creedmoor.

Eighteenth Separate Company,

Glens Falls. Range and butts in good order ; is in good use.

Nineteenth Separate Company,

Poughkeepsie. (See Fifteenth Separate Company.)

Twentieth Separate Company and Sixth Battery,

Binghamton. Range a good one ; iron targets should be replaced at once by canvas and new pit.

Twenty-first Separate Company,

Troy, practices at Rensselaerwyck. (See Tenth Battalion.)

Twenty-second Separate Company,

Saratoga. Range in good shape ; butts and targets new last year.

Twenty-third Separate Company,

Hudson. New range and targets this season ; was excellently well cared for.

Twenty-fourth Separate Company,

Middletown. New range projected.

Twenty-sixth Separate Company,

Elmira. Uses range of S. T. Rifle Association. Butt needs slight repairs ; otherwise in good shape.

Twenty-seventh Separate Company,

Malone. Poor range ; dangerous ; should find new location and apply for targets.

Twenty-eighth Separate Company,

Utica. Have no range ; make no effort to obtain one ; think commanding officer can not realize position this puts him in,

Twenty-ninth Separate Company,

Oswego. Range is on government property and is not in good shape ; should be looked after.

Thirtieth Separate Company,

Elmira. (See Twenty-sixth Separate Company.)

Thirty-first Separate Company,

Mohawk. Have temporary range only ; should secure location and apply for targets.

Thirty-second Separate Company,

Hoosick Falls, practice at Rensselaerwyck ; ought to have range nearer home.

Thirty-third Separate Company,

Walton. Good range, easy of access ; targets and butts new in 1887 ; especially well cared for.

Thirty-fourth Separate Company.

Geneva. A poor range, badly located and very dangerous ; commanding officer should at once relocate range and apply for targets.

Thirty-fifth Separate Company,

Ogdensburg. Poor butt ; good range if can be kept ; would advise help to some extent.

Thirty-sixth and Thirty-Seventh Separate Companies,

Schenectady. Range and butt in good shape.

Thirty-eighth Separate Company,

Oswego. (See Twenty-ninth Separate Company.)

Thirty-ninth Separate Company,

Watertown. This range needs new butt and targets.

Fortieth and Forty-first Separate Companies,

Syracuse. Have no range ; no good reason why one is not located near.

Forty-second Separate Company,

Niagara Falls. Good range and butt ; not as well cared for as should expect from so good a company.

Forty-third Separate Company,

Olean. Range relocated and targets moved at company's expense; show good deal of vim; think will be well looked after.

Forty-fourth Separate Company,

Utica. (See remarks, Twenty-eighth Separate Company.)

Forty-fifth Separate Company,

Cortland. New company; range located and targets allowed — too late to build this year.

The Tenth Battalion,

of Albany, use range at Rensselaerwyck. Extensive repairs needed here; ought to have four new third-class and four new second-class targets and butts entirely rebuilt; so accessible a range as this, near a large city, should be owned by the State and kept up for use of troops.

The Sixty-fifth and Seventy-fourth Regiments,

of Buffalo, use range at Bay View. This range, built some twelve years since, is continually in need of repairs; is well looked after and, as far as possible, kept up.

Under orders about 8,000 men have practiced on various ranges, and for team and other practices probably 3,000 more, showing renewed and stable interest in the duty called for.

The following table will show amounts allowed in 1888, for sustaining the different ranges, viz.:

Creedmoor	\$4,000
Rensselaerwyck.....	650
Bay View	500
Poughkeepsie	100
Elmira.....	100
Oneonta	50
Watertown.....	50
Niagara.....	50
Binghamton.....	50
Glens Falls	50
Kingston	50
Auburn.....	50
Ogdensburg.....	50
Olean.....	50

Saratoga.....	\$0 50
Schenectady	50
Penn Yan.....	50
Rochester.....	50
Newburgh	50
Oswego.....	25
Walton	50

I am, sir, very respectfully yours.

CHARLES F. ROBBINS,
Brigadier-General and General Inspector Rifle Practice, S. N. Y.

STATE FIGURE OF MERIT.

STATE OF NEW YORK :

DEPARTMENT OF RIFLE PRACTICE,
NEW YORK, *December 31, 1888.* }

The following is, by the direction of the Commander-in-Chief, published for the information of the National Guard, as the figure of merit or comparative efficiency in rifle practice displayed by the various organizations during the year 1888 :

STATE FIGURE OF MERIT.

	1888.	1887.	1886.
Firing in ranks.....	52.37	53.70	50.09
Individual practice.....	48.64	50.10	43.88
General figure.....	50.51	51.90	46.99
Marksmen (number).....	46.18	47.28	36.46

BY BRIGADES.

Order of merit.	ORGANIZATIONS.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
1	Third.....	2,487	1,663	1,102	402	159	824	56.96	55.29	56.13
2	Fourth.....	1,891	1,238	723	393	122	653	58.39	51.99	55.19
3	Second.....	2,934	1,993	1,124	561	308	941	48.21	51.90	50.05
4	First.....	5,285	3,019	1,646	785	588	2,266	49.43	42.28	45.86

BY REGIMENTS.

1	Seventh.....	1,029	1,029	919	85	25	.....	65.00	94.75	79.88
2	Twenty-third.....	753	640	549	70	21	113	60.63	79.04	69.84
3	Sixty-fifth.....	454	292	212	65	15	162	61.17	55.95	58.56
4	Seventy-fourth.....	369	208	143	56	9	161	56.90	48.34	52.62
5	Forty-seventh.....	466	340	153	109	78	126	47.97	36.25	49.09
6	Tenth (Battalion).....	253	151	96	34	21	102	49.04	47.67	48.36
7	Thirteenth.....	683	480	220	180	80	203	46.03	50.36	48.20
8	Twenty-second.....	578	318	141	120	57	260	50.94	38.82	44.88
9	Twelfth.....	616	392	140	146	106	224	40.94	40.39	40.67
10	Ninth.....	613	323	143	108	72	290	43.27	32.09	39.76
11	Seventy-first.....	538	294	96	99	99	244	40.63	32.56	36.59
12	Fourteenth.....	546	250	109	95	46	296	40.18	32.09	36.14
13	Eighth.....	413	206	61	75	70	207	40.44	29.05	34.75
14	Thirty-second.....	417	219	43	96	80	198	35.18	27.96	31.57
15	Sixty-ninth.....	930	258	110	84	64	672	35.98	18.62	27.30
16	Eleventh.....	558	191	31	65	95	367	29.16	15.95	22.50

BY COMPANIES.

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
1	B, 7th Regiment.....	101	117	113	4	....	....	71.37	114.25	92.81
2	Ninth Separate.....	56	61	59	2	....	....	70.20	107.50	88.85
3	I, 7th Regiment.....	100	106	100	6	....	....	67.31	102.57	84.94
4	I, 23d Regiment.....	101	100	96	3	1	1	70.66	97.03	83.85
5	K, 7th Regiment.....	101	106	93	13	....	....	67.63	99.80	83.72
6	H, 7th Regiment.....	101	102	90	9	3	....	71.53	95.05	83.29
7	F, 7th Regiment.....	101	107	102	5	....	....	62.59	103.96	83.28
8	B, 23d Regiment.....	54	52	46	4	2	2	69.08	90.37	79.73
9	Thirty-ninth Separate.....	72	65	60	4	1	7	71.40	86.94	79.17
10	Twentieth Separate.....	76	76	60	15	1	....	67.21	91.05	79.13
11	D, 23d Regiment.....	50	50	37	12	1	....	67.12	88.80	77.96
12	G, 7th Regiment.....	101	102	90	7	5	....	59.27	94.26	76.77
13	E, 7th Regiment.....	101	98	87	9	2	3	60.69	91.88	76.29
14	Eighteenth Separate.....	64	50	46	2	14	....	78.21	74.37	76.29
15	Seventh Separate.....	73	71	67	2	2	2	57.25	93.97	75.61
16	A, 7th Regiment.....	101	92	77	15	....	9	65.70	85.15	75.43
17	Twenty-seventh Separate.....	60	54	45	7	2	6	67.84	82.66	75.25
18	C, 7th Regiment.....	101	92	84	4	4	9	63.84	86.33	75.09
19	Forty-second Separate.....	102	99	64	29	6	3	67.65	80.98	74.32
20	Thirty-second Separate.....	80	69	67	2	....	11	63.17	85.25	74.21
21	Second Separate.....	97	89	72	14	3	8	64.00	83.50	73.75
22	Sixth Separate.....	102	91	69	20	2	11	65.37	79.80	72.59
23	C, 23d Regiment.....	70	59	51	8	....	11	62.15	79.71	70.93
24	Third Separate.....	91	81	54	26	1	10	64.66	76.70	70.68
25	Thirty-third Separate.....	69	60	42	13	5	9	67.70	73.62	70.66
26	Seventeenth Separate.....	59	55	41	11	3	4	59.55	81.70	70.63
27	A, 23d Regiment.....	101	88	77	8	3	13	58.56	81.58	70.07
28	F, 74th Regiment.....	53	43	33	10	....	10	64.20	73.58	68.89
29	F, 23d Regiment.....	75	65	57	5	3	10	53.42	80.80	67.11
30	Thirtieth Separate.....	62	46	39	6	1	16	63.79	69.03	66.41
31	H, 23d Regiment.....	75	64	54	4	6	11	55.82	76.80	66.31
32	Twenty-first Separate.....	77	71	56	9	6	6	50.61	81.30	65.96
33	I, 65th Regiment.....	56	41	27	12	2	15	68.12	61.78	64.95
34	D, 7th Regiment.....	101	89	67	12	10	12	54.07	75.44	64.76
35	F, 47th Regiment.....	51	45	29	12	4	6	56.11	72.55	64.33
36	A, 65th Regiment.....	66	44	40	3	1	22	62.85	63.63	63.24
37	D, 65th Regiment.....	53	41	33	4	4	12	57.87	68.30	63.09
38	Forty-third Separate.....	80	76	30	30	16	4	59.29	64.00	61.65
39	K, 23d Regiment.....	90	64	55	8	1	26	56.18	66.66	61.42
40	Fourteenth Separate.....	74	50	30	15	5	24	66.14	54.06	60.10
41	G, 23d Regiment.....	64	47	35	9	3	17	56.06	64.06	60.06
42	F, 65th Regiment.....	49	36	22	12	2	13	59.37	60.41	59.89
43	Twenty-third Separate.....	74	52	38	12	2	22	57.91	61.62	59.77
44	First Separate.....	63	57	29	16	12	6	53.36	65.08	59.22
45	G, 65th Regiment.....	48	22	17	5	....	26	76.36	41.66	59.01
46	Thirty-fifth Separate.....	69	68	38	21	9	1	41.32	75.94	58.63
47	B, Twelfth Regiment.....	44	34	17	10	7	10	61.37	55.45	58.41
48	Thirty-fourth Separate.....	65	49	22	22	5	16	58.64	55.70	57.17
49	F, 13th Regiment.....	46	32	20	9	3	14	57.31	56.52	56.92
50	B, 74th Regiment.....	63	42	25	15	2	21	58.74	54.60	56.67
51	K, 47th Regiment.....	60	52	28	15	9	8	47.63	64.66	56.15
52	B, 10th Battalion.....	57	46	35	6	5	11	39.57	69.47	54.52
53	G, 13th Regiment.....	95	76	43	26	7	19	45.22	63.16	54.19
54	H, 65th Regiment.....	59	35	24	10	1	24	50.73	57.19	54.11
55	F, 22d Regiment.....	39	26	17	7	2	13	52.00	55.38	53.69
56	Tenth Separate.....	57	34	16	13	5	23	63.40	43.68	53.54
57	Eighth Separate.....	68	39	25	10	4	29	59.71	46.77	53.24
58	A, 10th Battalion.....	67	45	26	8	11	22	56.56	49.25	52.91
59	Fourth Separate.....	83	61	38	16	7	22	46.41	59.03	52.72
60	Sixteenth Separate.....	62	35	18	15	2	27	59.86	44.20	52.03
61	A, 74th Regiment.....	51	34	19	13	2	17	50.66	53.33	52.00
62	B, 65th Regiment.....	54	30	22	8	....	24	54.33	49.63	51.98
63	B, 22d Regiment.....	76	50	30	15	5	26	51.13	52.63	51.88
64	E, 23d Regiment.....	55	33	24	8	1	22	50.66	52.73	51.70
65	C, 65th Regiment.....	51	28	16	9	3	23	60.10	43.14	51.62
66	G, 47th Regiment.....	68	46	22	14	10	22	55.46	47.65	51.56
67	Twenty-sixth Separate.....	84	65	32	26	7	19	44.71	58.33	51.52
68	Thirty-eighth Separate.....	58	31	16	15	....	27	57.33	43.10	50.22
69	E, 74th Regiment.....	53	22	20	2	....	31	60.00	40.00	50.00

BY COMPANIES — (Continued).

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
70	E, 22d Regiment.....	89	49	17	26	6	40	61.07	38.00	49.54
71	I, 13th Regiment.....	50	40	16	16	8	10	44.60	54.40	49.50
72	I, 12th Regiment.....	46	18	7	9	2	28	71.15	27.83	49.49
73	D, 74th Regiment.....	43	22	18	4	....	21	50.36	47.44	48.90
74	B, 71st Regiment.....	54	33	19	9	5	21	49.94	47.04	48.49
75	D, 13th Regiment.....	48	31	16	11	4	17	48.21	48.75	48.48
76	K, 12th Regiment.....	40	29	12	13	4	11	44.44	51.50	47.97
77	I, 14th Regiment.....	50	27	20	7	....	23	46.80	48.40	47.60
78	Twenty-second Separate..	92	83	32	20	31	9	39.93	54.56	47.25
79	B, 13th Regiment.....	55	40	12	18	10	15	49.41	45.09	47.25
80	A, 13th Regiment.....	60	46	17	15	14	14	46.21	48.00	47.11
81	F, 9th Regiment.....	48	26	15	7	4	22	51.26	41.66	46.46
82	K, 13th Regiment.....	77	66	26	24	16	11	35.54	56.62	46.08
83	Fifth Separate.....	98	59	19	28	12	39	52.82	39.00	45.91
84	Twenty-ninth Separate...	51	35	9	24	2	16	44.46	46.66	45.56
85	D, 47th Regiment.....	60	42	19	12	11	18	43.51	47.33	45.42
86	H, 13th Regiment.....	72	38	20	16	2	34	49.04	41.66	45.35
87	Eleventh Separate.....	58	42	15	16	11	16	42.95	46.21	44.58
88	H, 9th Regiment.....	56	32	16	12	4	24	46.23	42.86	44.55
89	E, 13th Regiment.....	98	56	23	26	7	42	47.90	40.81	44.36
90	D, 10th Battalion.....	52	17	12	4	1	35	60.64	28.08	44.36
91	I, 22d Regiment.....	49	24	7	17	....	25	53.37	35.10	44.24
92	C, 13th Regiment.....	63	39	15	16	8	24	46.73	41.59	44.16
93	G, 14th Regiment.....	53	22	11	9	2	31	56.48	31.70	44.09
94	Nineteenth Separate.....	102	67	23	34	10	35	43.25	44.51	43.88
95	I, 9th Regiment.....	50	31	21	3	7	19	38.43	48.40	43.42
96	B, 9th Regiment.....	78	38	17	14	7	40	51.29	34.36	42.83
97	F, 12th Regiment.....	59	46	14	20	12	13	37.50	48.13	42.82
98	A, 47th Regiment.....	49	30	11	9	10	19	48.00	37.55	42.78
99	I, 47th Regiment.....	66	49	14	21	14	17	40.60	44.54	42.57
100	C, 22d Regiment.....	50	28	9	13	6	22	49.11	36.00	42.56
101	E, 47th Regiment.....	48	30	8	13	9	18	48.38	36.66	42.52
102	G, 22d Regiment.....	48	29	13	9	7	19	43.54	41.25	42.40
103	K, 14th Regiment.....	53	35	9	20	6	18	42.77	41.88	42.33
104	Thirteenth Separate.....	96	57	12	37	8	39	46.99	37.29	42.14
105	C, 71st Regiment.....	56	30	15	13	2	26	42.70	41.43	42.07
106	C, 12th Regiment.....	61	39	12	16	11	22	44.16	39.01	41.69
107	Twelfth Separate.....	89	38	24	11	3	51	47.46	35.06	41.26
108	C, 10th Battalion.....	65	33	16	13	4	32	43.93	37.85	40.89
109	A, 14th Regiment.....	63	43	18	15	10	20	34.49	46.03	40.26
110	A, 22d Regiment.....	64	35	14	15	6	29	42.61	37.81	40.21
111	D, 12th Regiment.....	88	55	14	20	21	33	45.38	34.32	39.85
112	H, 22d Regiment.....	67	32	12	9	11	35	50.20	29.25	39.73
113	B, 47th Regiment.....	45	29	8	11	10	16	42.50	36.90	39.70
114	K, 22d Regiment.....	41	19	7	5	7	22	50.50	27.80	39.15
115	C, 69th Regiment.....	83	36	27	5	4	47	41.00	37.11	39.06
116	D, 22d Regiment.....	37	16	7	3	6	21	50.80	27.03	38.92
117	D, 9th Regiment.....	50	26	9	10	7	24	44.88	32.80	38.84
118	B, 14th Regiment.....	52	34	12	14	8	18	33.87	42.31	38.09
119	K, 71st Regiment.....	64	40	9	14	17	24	43.57	32.50	38.04
120	A, 32d Regiment.....	36	17	4	7	6	19	49.80	26.11	37.96
121	D, 32d Regiment.....	62	27	11	9	7	35	47.00	28.71	37.86
122	C, 8th Regiment.....	40	21	5	9	7	19	45.87	29.50	37.69
123	F, 9th Regiment.....	53	27	10	10	7	26	42.36	32.83	37.60
124	G, 12th Regiment.....	74	50	12	22	16	24	36.77	38.38	37.58
125	H, 71st Regiment.....	64	33	13	9	11	31	42.50	32.19	37.35
126	H, 14th Regiment.....	48	11	4	4	3	37	59.33	14.58	36.96
127	Thirty-sixth Separate.....	64	28	19	8	1	36	36.32	37.50	36.91
128	E, 9th Regiment.....	55	22	8	8	6	33	48.22	25.45	36.84
129	E, 8th Regiment.....	55	29	8	10	11	16	44.08	29.45	36.77
130	A, 71st Regiment.....	66	36	12	11	13	30	41.15	32.12	36.64
131	H, 8th Regiment.....	46	22	3	12	7	24	47.90	25.22	36.56
132	G, 74th Regiment.....	44	15	6	6	3	29	49.75	23.18	36.47
133	A, 69th Regiment.....	83	31	10	7	14	52	51.77	20.48	36.13
134	D, 71st Regiment.....	75	45	6	21	18	30	42.51	29.60	36.06
135	C, 9th Regiment.....	45	18	2	12	4	27	49.86	22.22	36.04
136	G, 8th Regiment.....	55	27	10	6	11	28	43.02	28.73	35.88
137	E, 12th Regiment.....	48	20	10	7	3	28	40.88	30.83	35.86
138	K, 9th Regiment.....	60	20	11	6	3	40	45.68	25.33	35.51

BY COMPANIES — (Continued).

Order of merit.	ORGANIZATION.	Inspection.	Practicing.	Marksmen.	CLASSES.			FIGURE OF MERIT.		
					First.	Second.	Third.	Volley and skirmish.	Individual.	General.
139	A, 12th Regiment.....	61	35	14	8	13	26	35.68	35.08	35.38
140	A, 9th Regiment.....	100	66	18	26	22	34	32.06	38.00	35.03
141	B, 32d Regiment.....	39	28	3	10	15	11	38.07	30.77	34.42
142	B, 8th Regiment.....	41	26	6	10	10	15	33.25	34.15	33.70
143	I, 71st Regiment.....	48	12	4	3	5	36	53.17	14.66	33.67
144	G, 32d Regiment.....	39	26	5	13	8	13	30.00	36.92	33.46
145	H, 12th Regiment.....	77	49	12	21	16	28	30.55	36.10	33.33
146	D, 8th Regiment.....	57	28	8	10	10	29	37.86	28.07	32.97
147	G, 69th Regiment.....	94	23	8	12	3	71	48.28	16.80	32.54
148	I, 8th Regiment.....	52	29	10	8	11	23	32.08	32.69	32.39
149	Fortieth Separate.....	65	38	5	22	11	27	33.13	31.38	32.26
150	C, 14th Regiment.....	48	18	9	4	5	30	38.44	25.83	32.14
151	K, 69th Regiment.....	89	26	13	12	1	63	40.00	22.92	31.46
152	C, 74th Regiment.....	43	18	11	5	2	25	28.88	33.49	31.19
153	K, 32d Regiment.....	28	16	....	8	8	12	39.25	22.86	31.06
154	E, 8th Regiment.....	50	13	3	7	3	37	44.00	15.60	29.80
155	C, 11th Regiment.....	68	30	4	12	14	38	38.72	20.58	29.65
156	Fifteenth Separate.....	63	24	3	16	5	39	36.48	21.58	29.03
157	C, 32d Regiment.....	56	24	3	13	8	32	32.69	22.14	27.42
158	F, 32d Regiment.....	48	32	3	13	16	16	25.33	29.17	27.25
159	I, 32d Regiment.....	40	12	2	8	2	28	36.50	18.00	27.25
160	F, 69th Regiment.....	93	27	9	9	9	66	35.57	17.42	26.50
161	F, 11th Regiment.....	42	16	5	1	10	26	34.77	18.10	26.44
162	Thirty-seventh Separate..	69	48	22	22	4	21	....	52.17	26.09
163	F, 71st Regiment.....	56	33	5	10	18	23	25.66	26.07	25.87
164	D, 14th Regiment.....	66	23	9	8	6	43	28.95	22.73	25.84
165	A, 11th Regiment.....	86	20	3	9	8	66	37.63	11.63	24.63
166	G, 71st Regiment.....	37	19	4	5	10	18	24.70	24.32	24.51
167	E, 69th Regiment.....	101	15	5	5	5	86	40.75	8.91	24.83
168	I, 11th Regiment.....	63	17	3	5	9	46	36.55	12.38	24.47
169	Sixth Battery.....	68	43	24	13	6	25	....	48.53	24.27
170	H, 69th Regiment.....	100	24	10	9	5	76	30.25	16.40	23.33
171	K, 11th Regiment.....	51	23	2	11	10	28	25.64	20.78	23.21
172	H, 32d Regiment.....	50	19	2	9	8	31	28.00	18.00	23.00
173	B, 69th Regiment.....	90	31	9	8	14	59	27.20	18.44	22.82
174	B, 11th Regiment.....	73	29	6	6	17	44	24.00	17.81	20.91
175	H, 11th Regiment.....	47	8	....	5	3	39	33.60	7.66	20.63
176	Thirty-first Separate.....	65	30	21	6	3	35	....	38.77	19.39
177	I, 69th Regiment.....	78	13	6	4	3	65	24.00	11.54	17.77
178	D, 69th Regiment.....	100	21	5	10	6	79	21.64	12.20	16.92
179	D, 11th Regiment.....	67	22	2	6	14	45	19.43	12.54	15.99
180	Forty-first Separate.....	75	47	5	19	23	28	....	28.00	14.00
181	F, 14th Regiment.....	46	17	5	6	6	29	....	21.30	10.65
182	G, 11th Regiment.....	47	12	2	1	9	35	11.33	9.36	10.35
183	E, 14th Regiment.....	50	12	5	7	....	38	....	18.40	9.20
184	Twenty-fourth Separate.....	73	....	....	....	....	73	No	prac	tice.
185	Twenty-fifth Separate.....	31	....	....	....	....	31	No	prac	tice.
186	Twenty-eighth Separate..	71	....	....	....	....	71	No	prac	tice.
187	Forty-fourth Separate.....	73	....	....	....	....	73	No	prac	tice.
188	Forty-fifth Separate.....	61	1	1	....	....	60	No	prac	tice.

MARKSMEN.

The following members of the National Guard have qualified as marksmen during the year 1888, those qualifying for the fourteenth time being printed in *italics*. The star (thus *) designates sharpshooters, viz.: those having made in 1888 scores of 42 points and upward.

Reported as qualifying during the year 1888.

GENERAL STAFF AND STAFF DEPARTMENTS.

Rank.	NAME.	Position.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Colonel.....	P. P. Beals *	D. R. P.....	21	24	45	Aug. 11	C. M. C.	8
Brig.-General ..	C. F. Robbins *	G. I. R. P.....	22	23	45	July 14	C. M. C.	12
Colonel.....	Jno. Bodine *	Asst. G. I. R. P.	20	23	43	Sept. 29	C. M. C.	12
Lieut.-Colonel ..	<i>F. C. McLewee *</i>	Asst. I. G.....	21	21	42	Aug. 25	C. M. C.	13
Brig.-General ..	C. A. H. Bartlett.	J. A. G.....	16	22	38	Nov. 6	C. M. C.	7
Colonel.....	E. B. Ten Broeck.	P. D.....	18	18	36	Oct. 27	C. M. C.	5
Colonel.....	E. L. Judson, 2d.	A. D. C.....	17	13	30	Oct. 27	C. M. C.	2
Colonel.....	<i>J. G. Story</i>	O. D.....	18	10	28	Oct. 5	.....	13

Total..... 8.

SUPERNUMERARY.

Rank.	NAME.	Position.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Major.....	C. E. De La Vergne *	.....	22	22	44	June 9	C. M. C.	5
Lieut.-Colonel ..	D. Sourwine.....	.....	19	19	38	June 23	C. M. C.	5
Major.....	W. F. Morgan.....	.....	14	19	33	May 9	.....	5
Brig.-General ..	E. O. Beers.....	.....	15	18	33	Aug. 27	.....	5
Major.....	F. E. Webb.....	.....	18	15	33	May 9	.....	5
Captain.....	H. A. Menken.....	.....	16	16	32	Sept. 22	C. M. C.	11
Colonel.....	<i>E. A. Rockwood</i>..	.....	18	14	32	Aug. 11	C. M. C.	13
Captain.....	P. C. Bain.....	.....	16	14	30	July 24	.....	11
Lieut.-Colonel ..	Robt. Olyphant ..	.....	19	11	30	Nov. 3	.....	11
Lieutenant.....	C. W. Topping.....	.....	14	14	28	June 21	.....	2
Captain.....	L. F. d'Ovemieux ..	.....	16	11	27	May 9	.....	2

Total..... 11.

FIRST BRIGADE.

(Figure of merit..... 45.86.)

GENERAL AND STAFF.

(Figure of merit..... 68.00.)

Rank.	NAME.	Position.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Major.....	David Crocker .....	.....	18	15	33	Sept. 11	C. M. C.	...
Major.....	Paul Dana.....	.....	14	18	32	June 18	.....	5
Brig.-General..	Louis Fitzgerald....	.....	20	12	32	May 22	.....	10
Captain.....	W. E. Roosevelt.....	.....	11	19	30	May 22	.....	4
Lieut.-Colonel..	R. W. Leonard .....	.....	13	12	25	May 22	.....	...

Total..... 5.

SEVENTH REGIMENT.

(Figure of merit..... 79.88.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private.....	H. T. Lockwood*.....	A	24	25	49	Sept. 29	M. B.....	7
Private.....	C. A. Jones*.....	G	22	25	47	Aug. 25	M. B.....	6
Sergeant.....	W. J. Underwood*.....	H	23	24	47	Aug. 11	M. B.....	10
Private.....	A. Stein*.....	C	23	24	47	Aug. 4	M. B.....	1
Private.....	J. D. Foot*.....	F	23	24	47	July 21	M. B.....	2
Captain.....	W. H. Palmer* (I. R. P.)..	Staff.	24	23	47	Aug. 25	M. B.....	11
Private.....	G. L. Stebbins*.....	K	22	24	46	July 21	M. B.....	2
Private.....	O. E. Dudley*.....	F	22	24	46	Aug. 25	M. B.....	3
Private.....	J. E. McNicol*.....	C	23	23	46	Oct. 2	.....	12
Private.....	G. L. Hoffman*.....	H	24	22	46	Aug. 25	M. B.....	3
Private.....	G. W. Happy*.....	B	20	25	45	Aug. 18	M. B.....	8
Private.....	W. A. Bryant*.....	H	21	24	45	Sept. 13	All comers..	10
Corporal.....	J. N. Munson*.....	G	21	24	45	Sept. 14	N. Y. State..	6
Private.....	R. M. Kallouch*.....	H	21	24	45	Sept. 13	All comers..	5
Second Lieut.	A. McDougall*.....	C	21	24	45	Aug. 18	M. B.....	8
Private.....	A. G. Seranton*.....	F	21	24	45	Aug. 25	M. B.....	7
Corporal.....	A. W. Trotter*.....	E	22	23	45	Oct. 13	M. B.....	4
Corporal.....	B. M. Dunn*.....	B	22	23	45	Aug. 25	M. B.....	3
Private.....	J. W. Cochran*.....	G	22	23	45	May 12	.....	6
Corporal.....	W. A. Dixon*.....	G	22	23	45	June 9	M. B.....	6
Private.....	McG. Butt*.....	K	22	23	45	June 23	M. B.....	7
Private.....	D. Bacon*.....	K	20	24	44	Aug. 11	M. B.....	4
Sergeant.....	A. L. Ely*.....	G	20	24	44	Aug. 18	M. B.....	9
Private.....	G. C. Whaley*.....	E	20	24	44	Aug. 25	M. B.....	2
Q. M. Sergt....	H. B. Thomson*.....	C	20	24	44	Aug. 11	M. B.....	11
Private.....	F. S. Kennedy*.....	F	21	23	44	Aug. 18	M. B.....	5
Second Lieut.	S. W. Merritt*.....	B	21	23	44	Sept. 13	All comers..	7
Private.....	G. U. Dixon*.....	G	21	23	44	June 9	M. B.....	5
Private.....	J. W. Halstead*.....	C	21	23	44	June 23	M. B.....	1
Private.....	W. W. Martin*.....	G	21	23	44	Oct. 13	M. B.....	3

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Corporal.....	P. L. Klock*	H	22	22	44	July 14	M. B.	2
First Lieut....	G. W. Rand*, Adjt.	Staff.	22	22	44	June 23	M. B.	13
Private.....	F. W. Perkins	F	24	20	44	Nov. 6	M. B.	1
Private.....	H. E. Chapman*	K	19	24	43	Sept. 13	All comers.	4
First Sergt....	R. McLean*	K	19	24	43	July 21	M. B.	1
Private.....	H. W. Janssen*	A	19	24	43	June 9	M. B.	2
First Sergt....	J. B. Holland*	A	20	23	43	June 9	M. B.	13
Captain.....	A. W. Conover*	A	21	22	43	Sept. 3	M. B.	12
Private.....	A. R. Angell*	A	21	22	43	May 12		3
Corporal.....	R. Darling*	A	21	22	43	June 23	M. B.	3
Corporal.....	J. W. Cleveland*	I	19	23	42	Aug. 25	M. B.	6
First Lieut....	J. F. Long, * Q. M.	Staff.	19	23	42	Oct. 2		8
Sergeant.....	F. Van Lennep*	K	19	23	42	July 14	M. B.	7
Private.....	E. R. Richards*	D	20	22	42	Nov. 6	M. B.	4
Captain.....	J. C. Abrams*	G	20	22	42	July 14	M. B.	13
Private.....	J. P. M. Richards*	G	21	21	42	May 23		6
Sergeant.....	D. Valentine, Jr.*	B	21	21	42	May 22		9
Private.....	H. H. Spies*	G	21	21	42	Aug. 25	M. B.	6
Corporal.....	H. S. Bartow*	D	22	20	42	Sept. 13	All comers.	2
Private.....	T. W. Linton	H	20	21	41	Sept. 13	All comers.	6
Private.....	G. C. Power	K	20	21	41	Sept. 29	M. B.	8
Private.....	B. D. Darke	G	21	20	41	June 9	M. B.	5
Private.....	J. B. Elmendorf.	G	21	20	41	May 23		4
Sergeant.....	J. K. Green (R. G. G.).	N.C.S.	22	19	41	Sept. 13	All comers.	10
Private.....	R. L. Major	I	22	19	41	June 9	M. B.	5
Private.....	E. C. Schoonmaker	D	22	19	41	July 21	M. B.	6
Private.....	W. S. Righter	G	18	22	40	May 23		8
Private.....	E. Mildeberger	I	18	22	40	June 7		5
Private.....	G. H. Cooke	I	19	21	40	May 23		3
Private.....	J. T. Kirby	A	19	21	40	Oct. 27	M. B.	
Private.....	T. Wilson	A	20	20	40	June 9	M. B.	5
Private.....	C. W. Lindsley	F	20	20	40	May 24		3
Captain.....	L. E. Lefferts	K	17	22	39	May 22		10
Q. M. Sergt....	C. L. Waterbury	K	18	21	39	May 22		5
Private.....	W. A. Livingston	K	18	21	39	June 9	M. B.	1
Private.....	H. C. Titus	H	18	21	39	July 14	M. B.	12
Second Lieut.	C. E. Lydecker	H	20	19	39	May 23		11
Sergeant.....	C. F. Bement	A	20	19	39	May 21		6
Private.....	E. H. Allen, Jr.	I	20	19	39	July 28	M. B.	1
Private.....	A. Hebbard, Jr.	I	20	19	39	Aug. 11	M. B.	3
First Lieut....	D. A. Nesbitt	B	21	18	39	July 4	M. B.	9
Captain.....	W. A. Valentine (A. S.).	Staff.	18	20	38	May 21		8
Private.....	J. Miller	F	18	20	38	May 24		1
Private.....	F. W. Swinney	B	18	20	38	Nov. 6	M. B.	
Private.....	A. G. Todd	G	18	20	38	May 23		1
Private.....	R. Adams	O	19	19	38	Oct. 2		3
Private.....	R. Deming	H	19	19	38	Aug. 4	M. B.	1
Private.....	C. S. Gaubert	B	19	19	38	May 22		5
Private.....	J. A. Brower	I	19	19	38	June 7		1
Private.....	C. M. Benedict	B	20	18	38	May 3		2
Private.....	G. A. Wylie	G	20	18	38	May 23		1
Private.....	W. B. Allbright	C	21	17	38	May 8		1
Private.....	S. A. Cooper	G	21	17	38	May 23		7
Private.....	L. H. Broome	A	23	15	38	Aug. 11	M. B.	7
Private.....	C. L. Poor	F	14	23	37	Aug. 11	M. B.	1
Q. M. Sergt....	E. W. Burnette	F	15	22	37	May 24		11
Private.....	M. C. Patterson	B	15	22	37	May 22		8
Corporal.....	T. H. Smyth	D	16	21	37	July 21	M. B.	2
Private.....	G. A. Schastey, Jr.	A	16	21	37	May 21		1
Private.....	J. R. Dederer	F	18	19	37	May 24		11
Private.....	C. S. Martin	I	18	19	37	Sept. 3	M. B.	
Private.....	L. Sands	B	18	19	37	May 22		1
Private.....	H. J. Sills	G	18	19	37	Sept. 29	M. B.	
Private.....	M. A. White	B	18	19	37	May 22		3
Corporal.....	A. Wangler	H	19	18	37	May 10		5
Private.....	C. McDougall	B	19	18	37	May 3		
Private.....	W. A. Harper	I	19	18	37	Oct. 13	M. B.	2
Captain.....	A. Mills	H	20	17	37	May 23		11
Private.....	J. Baker	F	20	17	37	July 4	M. B.	3

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	300 yards.	Total.			
Private.....	A. J. Woods.....	G	20	17	37	June 23	M. B.....	2
Corporal.....	J. W. B. Rockwell.....	G	13	23	36	May 23		5
Captain.....	H. D. Cooper.....	D	14	22	36	Oct. 13	M. B.....	12
Private.....	L. W. McLeod.....	I	15	21	36	June 7		1
Private.....	R. P. Porter.....	E	16	20	36	July 28	M. B.....	
Sergeant.....	F. H. Clark.....	D	17	19	36	May 24		
Private.....	E. L. Jones.....	K	17	19	36	Oct. 13	M. B.....	1
Private.....	J. H. Seymour.....	H	17	19	36	May 23		4
Private.....	E. R. Raynor.....	A	17	19	36	Aug. 25	M. B.....	5
Corporal.....	W. H. Journeay.....	A	17	19	36	May 21		5
Private.....	W. H. Brainard.....	C	17	19	36	Aug. 11	M. B.....	1
Private.....	J. W. Wood, Jr.....	I	17	19	36	June 7		6
Private.....	W. N. Edelsten.....	G	18	18	36	May 23		1
Private.....	T. E. Tripler, Jr.....	G	18	18	36	May 23		1
Private.....	A. Rusch.....	B	18	18	36	May 22		5
Private.....	C. S. Campbell.....	K	18	18	36	Oct. 27	M. B.....	1
Private.....	W. B. Miles.....	H	18	18	36	May 23		
Private.....	L. J. Josecelyn.....	H	19	17	36	May 23		4
Private.....	W. P. Collins.....	E	19	17	36	Aug. 25	M. B.....	3
Private.....	H. A. Bostwick, Jr.....	B	19	17	36	May 3		3
Private.....	J. G. How.....	K	19	17	36	Nov. 6	M. B.....	5
Private.....	C. H. Cadwell.....	F	19	17	36	May 24		7
Private.....	C. F. Bostwick.....	B	19	17	36	May 22		2
Private.....	W. S. Scott.....	K	19	17	36	May 22		
Private.....	A. M. Tredwell.....	G	19	17	36	July 21	M. B.....	3
Sergeant.....	W. G. Bates.....	K	20	16	36	May 22		5
Corporal.....	J. V. Black.....	B	20	16	36	May 22		8
Private.....	C. G. Hanft.....	C	20	16	36	Nov. 6	M. B.....	
Private.....	R. C. Corner.....	B	20	16	36	May 12		4
Private.....	E. Scheitlin, Jr.....	H	20	16	36	May 9		6
Private.....	G. F. Pelham.....	H	20	16	36	May 23		3
First Lieut.....	J. A. Tackaberry.....	H	12	23	35	May 23		11
Private.....	J. A. Livingston.....	E	12	23	35	June 7		6
Private.....	J. H. Tripler.....	G	14	21	35	May 23		3
Private.....	H. N. Camp, Jr.....	K	15	20	35	May 22		2
Private.....	J. Miller.....	E	15	20	35	June 7		2
Private.....	L. Trask.....	G	15	20	35	Sept. 29	M. B.....	
Private.....	W. S. Black.....	H	16	19	35	May 23		2
Private.....	N. C. Fisher.....	H	16	19	35	July 14	M. B.....	3
Private.....	G. Karsch.....	H	16	19	35	May 23		5
Private.....	F. C. Pollard.....	D	16	19	35	July 4	M. B.....	2
Sergeant.....	W. H. Heisser (C. S.).....	N, C S	17	18	35	May 7		11
Sergeant.....	F. Koch.....	E	17	18	35	Aug. 18	M. B.....	3
Corporal.....	J. J. White, Jr.....	K	17	18	35	May 22		5
Private.....	S. H. Rich.....	A	17	18	35	May 21		1
Major.....	W. H. Kipp.....	Field	18	17	35	May 23		11
First Lieut.....	F. Pawling.....	F	18	17	35	May 24		6
Private.....	H. V. Borden.....	I	18	17	35	July 14	M. B.....	1
Private.....	C. L. Comfort.....	F	18	17	35	May 24		6
Private.....	H. C. Jones.....	G	18	17	35	July 4	M. B.....	4
Private.....	W. S. Sheldon.....	D	18	17	35	July 21	M. B.....	2
Private.....	C. L. True.....	B	18	17	35	May 22		7
Private.....	W. H. Brown.....	E	19	16	35	Aug. 25	M. B.....	
Private.....	C. F. Burhans.....	B	19	16	35	Sept. 18		1
Private.....	F. G. McDougall.....	B	19	16	35	June 23	M. B.....	2
Private.....	E. L. Wharton.....	E	19	16	35	Oct. 2		
Private.....	C. E. Young.....	B	19	16	35	May 22		4
Private.....	C. C. Brown.....	I	20	15	35	Aug. 18	M. B.....	6
Private.....	M. Osborne.....	I	20	15	35	Oct. 13	M. B.....	3
Private.....	R. H. Pelton.....	A	20	15	35	Aug. 11	M. B.....	6
Corporal.....	R. L. Roe.....	B	21	14	35	May 22		3
Private.....	C. Cowl.....	K	21	14	35	Aug. 25	M. B.....	4
Private.....	A. E. Hoyt.....	B	21	14	35	May 22		4
Private.....	C. W. Miller.....	F	12	22	34	June 7		7
Private.....	C. W. Thom.....	I	12	22	34	May 24		4
Private.....	E. Horton.....	I	12	22	34	June 7		4
Sergeant.....	A. E. White.....	K	14	20	34	June 9	M. B.....	5
Private.....	H. H. Taintor.....	D	14	20	34	May 24		
Private.....	D. C. Meyer.....	C	14	20	34	July 28	M. B.....	4
Sergeant.....	W. E. Starr.....	H	15	19	34	Sept. 3	M. B.....	9

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. W. Salter, Jr.	H	15	19	34	May 23		2
Private	W. H. Gilson	I	15	19	34	Nov. 6	M. B.	
Private	F. P. Wilkinson	E	15	19	34	Sept. 29	M. B.	6
Private	C. F. French	C	15	19	34	Aug. 4	M. B.	
Private	H. Groesbeck	I	15	19	34	Oct. 13	M. B.	
Private	F. A. Burr	K	15	19	34	May 22		5
Private	E. A. Richard	L	16	18	34	June 7		4
Private	W. S. Wright	E	16	18	34	Oct. 13	M. B.	1
Private	N. M. Beckwith	B	16	18	34	Oct. 13	M. B.	10
Private	S. S. Chauncey	I	16	18	34	June 7		5
Private	D. L. Cobb	C	17	17	34	Nov. 6	M. B.	2
Private	F. A. Ware	B	17	17	34	Oct. 2		3
Private	F. L. Jones	F	17	17	34	Nov. 6	M. B.	
Private	E. H. Gouge	G	17	17	34	July 21	M. B.	5
Corporal	F. W. Janssen	A	18	16	34	Aug. 25	M. B.	3
Private	W. P. Wainwright, Jr.	K	18	16	34	May 12		2
Private	E. J. Chaffee, Jr.	I	18	16	34	June 7		1
Private	E. J. Heppenheimer	C	18	16	34	May 21		1
Private	H. V. Kepp	I	18	16	34	July 21	M. B.	3
Private	R. Dart, Jr.	F	18	16	34	Aug. 11	M. B.	7
Private	E. W. Gould, Jr.	A	18	16	34	May 21		4
Private	C. F. Brinck	B	18	16	34	May 22		5
Private	J. W. Coady	E	19	15	34	Sept. 13	All comers.	8
Private	O. H. Blackmar	C	19	15	34	May 21		1
Private	G. DuVal	I	19	15	34	June 7		1
Private	S. Frothingham	K	19	15	34	May 22		
Private	E. C. Center	K	20	14	34	Oct. 2		
Corporal	A. E. Pressinger	E	21	13	34	June 7		3
Private	C. Lembke, Jr.	D	21	13	34	Aug. 18	M. B.	4
Private	E. P. Jessup	F	22	12	34	May 24		2
Private	P. L. Lowd	E	13	20	33	June 7		2
Corporal	H. H. Knox	A	14	19	33	Sept. 13	All comers.	5
Corporal	C. L. Winters	G	14	19	33	July 14	M. B.	5
Corporal	W. Vores	E	15	18	33	Oct. 27	M. B.	5
Private	H. P. Fairchild	I	15	18	33	June 7		1
Private	F. M. G. Grosz	H	15	18	33	May 23		6
1st Lieut.	A. E. Allen	D	16	17	33	May 24		5
Sergeant	B. W. Anderson	B	16	17	33	May 22		8
Sergeant	S. M. Warnock	H	16	17	33	May 23		10
Private	A. B. Risley	C	16	17	33	July 4	M. B.	4
Private	R. P. Sherman	B	16	17	33	May 22		5
Private	F. W. Tufts	E	16	17	33	June 7		2
Private	E. G. Schermerhorn	I	16	17	33	June 7		2
Private	F. E. Triacca	H	17	16	33	Aug. 11	M. B.	4
Private	J. C. Wohlfert	E	17	16	33	Aug. 18	M. B.	5
Private	W. M. Halsted	B	17	16	33	May 10		4
Private	E. R. Lancaster	H	17	16	33	May 8		4
Sergeant	T. Babcock, Jr.	F	18	15	33	May 10		6
Corporal	W. D. Leonard	B	18	15	33	May 22		5
Private	W. E. Bradley	E	18	15	33	Sept. 3	M. B.	
Private	J. Riordan	B	18	15	33	June 23	M. B.	
Private	E. Martin, Jr.	F	18	15	33	June 9	M. B.	4
Private	E. S. Blunt	C	18	15	33	June 9	M. B.	1
Private	T. S. Veitch	D	18	15	33	Oct. 2		1
Private	T. B. Van Buren, Jr.	K	18	15	33	May 22		1
Private	W. M. Kennard	B	18	15	33	July 4	M. B.	3
Corporal	J. W. Dowling, Jr.	K	19	14	33	May 22		4
Private	F. W. Pohle	D	19	14	33	May 24		2
Private	L. K. Prince	I	19	14	33	Oct. 13	M. B.	
Private	D. A. Smith	D	19	14	33	July 4	M. B.	4
Private	F. B. McGay	B	20	13	33	May 22		3
Private	W. W. Cooke	G	20	13	33	May 23		4
Corporal	E. Dutcher	H	9	23	32	May 23		11
Private	H. H. Smith	F	12	20	32	May 24		
Private	H. J. Hall	I	12	20	32	June 7		1
Private	C. C. Moore, Jr.	H	13	19	32	Oct. 2		3
First Sergt	H. M. Nesbitt	B	14	18	32	June 23	M. B.	6
Private	C. Gottschalk	C	14	18	32	Sept. 3	M. B.	2
Private	H. H. Whitlock	I	14	18	32	June 23	M. B.	1
Private	A. S. Warner	G	14	18	32	Sept. 3	M. B.	

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. R. Langdon	A	14	18	32	June 23	M. B.	4
Private	A. Bertrand	C	14	18	32	May 21	.....	5
First Lieut.	W. C. Fisk	A	15	17	32	May 21	.....	9
Private	J. O. Wright	F	15	17	32	May 24	.....	9
Private	H. B. Rich	A	15	17	32	Sept. 29	M. B.	4
Private	S. W. S. Tennant	D	15	17	32	May 24	.....	3
Private	C. S. McKune	G	15	17	32	July 14	M. B.	1
Private	E. C. McCarter	H	15	17	32	Sept. 3	M. B.	1
Private	R. J. Chatry	F	15	17	32	May 24	.....	1
Private	E. B. Sellick	H	16	16	32	May 23	.....	3
Private	E. P. Getty, Jr.	F	16	16	32	July 14	M. B.	2
Private	G. J. Sontag	G	16	16	32	May 23	.....	1
Private	A. P. Riker	B	16	16	32	Oct. 27	M. B. ....	.....
Private	G. H. Floto	D	16	16	32	May 24	.....	4
Lieut. Col.	G. M. Smith	Field Staff.	17	15	32	Oct. 2	.....	11
Major	D. M. Stimson	(Surg) Staff.	17	15	32	May 23	.....	9
First Sergt.	T. A. Patteson, Jr.	D	17	15	32	May 24	.....	5
Sergeant	T. Guerra	C	17	15	32	June 9	M. B.	7
Sergeant	T. B. Vedder	D	17	15	32	Aug. 18	M. B.	7
Private	W. McKee	E	17	15	32	Sept. 29	M. B. ....	.....
Private	H. L. Backus	B	17	15	32	May 22	.....	2
Private	G. Romaine	B	17	15	32	May 22	.....	5
Private	E. L. Gridley	B	17	15	32	June 9	M. B.	1
Private	T. S. Draper	C	17	15	32	May 21	.....	3
Private	T. J. O. Rhineland	K	17	15	32	May 22	.....	2
Corporal	M. Crane, Jr.	C	17	15	32	May 8	.....	1
Private	G. D. Beattys	B	17	15	32	June 9	M. B.	1
Private	C. H. Nichols	C	17	15	32	May 21	.....	1
Private	G. H. Richards	B	17	15	32	May 22	.....	1
Private	R. Spaulding	E	17	15	32	Nov. 6	M. B. ....	.....
Sergeant	G. W. Romaine	D	18	14	32	Oct. 2	.....	5
Sergeant	G. W. Roosevelt, Jr.	A	18	14	32	May 21	.....	4
Private	J. Baird	B	18	14	32	Sept. 3	M. B.	3
Private	F. U. Paris	K	18	14	32	Aug. 18	M. B.	1
Private	W. E. Hume	A	18	14	32	May 21	.....	3
Private	P. Rhineland	K	18	14	32	Oct. 27	M. B.	3
Private	A. C. Chenoweth	A	18	14	32	May 21	.....	3
Private	H. B. Helmke	F	18	14	32	June 23	M. B. ....	.....
Private	W. Black	B	18	14	32	Oct. 13	M. B. ....	.....
Private	Z. Mayhew	H	18	14	32	May 23	.....	8
Private	A. A. Jordan	C	18	14	32	Oct. 2	.....	.....
Private	G. Y. Gilbert	B	18	14	32	June 23	M. B. ....	.....
Private	G. F. Carl	F	18	14	32	May 24	.....	7
Private	R. Chambers	B	18	14	32	May 22	.....	7
Private	W. H. Miller, Jr.	E	18	14	32	Sept. 3	M. B.	5
Private	C. I. Hoerber	I	18	14	32	June 7	.....	4
First Lieut.	J. W. McDougall	C	19	13	32	May 21	.....	11
Second Lieut.	J. McGreevey	G	19	13	32	Aug. 18	M. B.	1
Sergt. Major	W. B. Coughtry	N.C.S.	19	13	32	Sept. 13	All comers..	13
Corporal	C. P. Gately	B	19	13	32	May 22	.....	6
Corporal	J. A. Jenkins	B	19	13	32	May 9	.....	6
Private	W. J. Phillips	B	19	13	32	Sept. 19	.....	1
Private	C. E. Gleason	E	19	13	32	June 23	M. B.	2
Private	W. A. Cable	I	19	13	32	Oct. 2	.....	2
Private	W. H. Ketcham	H	19	13	32	May 23	.....	4
Corporal	R. Mazet	H	20	12	32	Aug. 4	M. B.	6
Private	W. Buhler, Jr.	A	20	12	32	May 21	.....	1
Private	W. C. B. Kemp	B	20	12	32	May 22	.....	6
Private	W. H. Frame	A	21	11	32	May 21	.....	2
Private	G. R. Martin	H	11	20	31	Nov. 6	M. B. ....	.....
Private	C. W. Macdonald	E	11	20	31	May 24	.....	4
Private	L. J. Phelps	K	12	19	31	June 9	M. B.	2
Private	C. P. Kirkland	K	12	19	31	May 22	.....	1
Second Lieut.	H. E. Zittel	E	13	18	31	June 7	.....	6
Private	T. K. Simpson	D	13	18	31	May 24	.....	2
Private	J. F. Slade	K	13	18	31	May 22	.....	5
Corporal	R. McWilliam	A	14	17	31	May 9	.....	3
Private	H. J. Schumacher	F	14	17	31	May 24	.....	2
Private	W. L. Hazen	B	14	17	31	May 22	.....	1
Private	L. F. Ballard	D	14	17	31	May 24	.....	2

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private.....	H. W. Comegys.....	A	15	16	31	May 21		11
Private.....	C. J. Colles.....	K	15	16	31	May 22		3
Private.....	E. P. Casey.....	I	15	16	31	June 7		2
Private.....	W. C. Thomas.....	F	15	16	31	Aug. 11	M. B.	1
Private.....	C. D. Merphy.....	D	15	16	31	May 12		3
Private.....	G. H. Gilman.....	B	15	16	31	Sept. 3	M. B.	
Private.....	C. F. Muller.....	I	15	16	31	June 7		6
Private.....	G. W. Thatcher, Jr.....	F	15	16	31	May 24		7
Private.....	E. P. Hatch.....	I	15	16	31	Oct. 13	M. B.	
Private.....	G. D. Pitman.....	F	15	16	31	May 24		5
Private.....	J. T. Fisher.....	B	15	16	31	July 14	M. B.	
Private.....	J. S. Mason.....	F	16	15	31	Oct. 2		1
Private.....	A. McLean, Jr.....	E	16	15	31	Aug. 18	M. B.	1
Private.....	T. McLelland.....	E	16	15	31	Sept. 3	M. B.	1
Private.....	G. E. Dickinson.....	K	16	15	31	Oct. 13	M. B.	
Private.....	R. E. Livingston.....	K	16	15	31	Oct. 2		
Private.....	E. C. Powles.....	H	16	15	31	May 23		4
Private.....	F. M. Haviland.....	B	16	15	31	May 22		4
Private.....	F. Blanchard.....	D	16	15	31	May 24		4
Private.....	W. C. Ely.....	I	16	15	31	June 7		1
First Lieut.....	J. B. Dewson.....	G	17	14	31	May 23		12
Sergeant.....	J. E. Schuyler.....	B	17	14	31	May 22		7
Sergeant.....	R. A. Powers.....	F	17	14	31	May 24		7
Sergeant.....	L. C. Connolly.....	D	17	14	31	Aug. 25	M. B.	2
Corporal.....	C. E. Warren.....	I	17	14	31	June 7		2
Private.....	O. Freeman.....	H	17	14	31	May 23		3
Private.....	H. Janes.....	I	17	14	31	Oct. 2		2
Corporal.....	C. L. Burnham.....	F	18	13	31	June 9	M. B.	3
Private.....	C. M. Englis.....	I	18	13	31	Sept. 29	M. B.	9
Private.....	W. A. Ransom, Jr.....	C	18	13	31	Sept. 29	M. B.	2
Private.....	J. M. Bolton.....	D	18	13	31	Oct. 2		1
Private.....	F. G. Cunningham.....	I	18	13	31	Aug. 25	M. B.	
Private.....	G. A. Homans.....	F	18	13	31	May 24		7
Private.....	H. H. Arthur.....	F	18	13	31	June 9	M. B.	6
Private.....	H. S. Raven.....	K	19	12	31	May 22		2
Private.....	C. A. Hawley.....	F	19	12	31	June 23	M. B.	1
Private.....	E. W. Berge.....	A	19	12	31	Oct. 13	M. B.	2
Private.....	C. Hersey.....	H	19	12	31	Oct. 13	M. B.	4
Captain.....	D. Appleton.....	F	20	11	31	May 24		10
Second Lieut.....	W. F. Peck.....	F	20	11	31	May 24		6
Corporal.....	G. H. Crawford.....	B	20	11	31	Sept. 3	M. B.	9
Private.....	G. L. Smith.....	I	20	11	31	Sept. 3	M. B.	1
Private.....	R. A. Stacpoole.....	B	20	11	31	May 22		3
Private.....	H. R. Browne.....	C	20	11	31	May 21		6
Private.....	J. Bain, Jr.....	D	20	11	31	May 24		2
Sergeant.....	P. D. Braisted, Jr. (S.S.B.)	N.C.S.	10	20	30	May 21		7
Private.....	G. R. Mosle.....	K	10	20	30	Oct. 27	M. B.	1
Private.....	D. S. Cameron.....	K	10	20	30	Sept. 3	M. B.	1
Private.....	F. A. Potter.....	F	11	19	30	June 9	M. B.	
Private.....	H. S. Brevoort.....	C	11	19	30	Oct. 2		4
Private.....	W. E. Mead.....	G	11	18	30	Sept. 3	M. B.	1
Private.....	H. C. Mabie.....	G	11	19	30	May 23		1
Sergeant.....	G. G. Stow (S. S. B.)	N.C.S.	13	17	30	May 21		11
Private.....	G. Kemble, Jr.....	F	13	17	30	May 24		3
Private.....	B. D. Chandler.....	C	13	17	30	Nov. 6	M. B.	
Private.....	H. W. Charles.....	A	13	17	30	July 4	M. B.	
Private.....	G. W. McLaughlin.....	E	13	17	30	June 7		
Private.....	H. D. Miles.....	B	13	17	30	May 22		5
Private.....	J. W. Myers.....	B	13	17	30	May 22		5
Private.....	H. B. Boyd.....	K	13	17	30	June 9	M. B.	5
Sergeant.....	O. Mussinan, Jr.....	D	14	16	30	May 24		6
Private.....	E. L. Freeman.....	B	14	16	30	Oct. 13	M. B.	
Private.....	W. M. Clarke.....	G	14	16	30	May 23		4
Private.....	C. G. Halliday.....	D	14	16	30	June 9	M. B.	1
Private.....	H. W. Banks, Jr.....	I	14	16	30	June 7		1
Private.....	H. A. Pomroy.....	I	14	16	30	June 7		1
Private.....	W. S. Parmelee.....	E	14	16	30	June 7		1
Private.....	W. S. Mills.....	K	14	16	30	May 22		1
Corporal.....	P. D. Handy.....	I	15	15	30	Sept. 29	M. B.	2
Corporal.....	J. Wotherspoon.....	H	15	15	30	May 23		5

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Corporal	M. H. Smith, Jr.	F	15	15	30	May 24		3
Private	C. R. Raser	E	15	15	30	Sept. 3	M. B.	
Private	C. E. Maxfield	F	15	15	30	May 24		3
Private	R. R. Billington	B	15	15	30	Oct. 13	M. B.	
Private	S. W. Ballou	E	15	15	30	Nov. 6	M. B.	
Private	T. Jantzer	G	15	15	30	June 9	M. B.	
Private	J. C. Acheson	I	15	15	30	Oct. 13	M. B.	
Private	G. F. Bates	H	15	15	30	Oct. 2		8
Private	A. G. Norrie	K	15	15	30	July 21	M. B.	1
Private	W. P. Claggett	I	15	15	30	Oct. 13	M. B.	1
Private	A. H. Smith	C	15	15	30	May 21		1
Private	F. Milliken	B	15	15	30	May 22		1
First Lieut.	W. G. Schuyler (Com'y).	Staff.	16	14	30	June 23	M. B.	8
Corporal	C. S. Clark	H	16	14	30	May 23		9
Private	W. S. Inglis	A	16	14	30	June 23	M. B.	
Private	B. H. Nicoll	E	16	14	30	Oct. 27	M. B.	
Private	W. H. Toll	I	16	14	30	July 4	M. B.	3
Private	E. R. Drake	C	16	14	30	July 21	M. B.	
Private	J. M. Hayward	C	16	14	30	May 21		5
Private	W. W. Price	B	16	14	30	Oct. 27	M. B.	1
Private	A. Ayers	B	16	14	30	May 22		3
Private	J. A. Davidson	H	16	14	30	July 28	M. B.	2
Private	V. M. Youmans	C	16	14	30	Oct. 2		1
Private	L. E. Lahens	K	16	14	30	July 28	M. B.	1
Private	H. M. Libby	H	16	14	30	May 23		1
Private	R. C. Page	B	16	14	30	May 22		1
First Lieut.	J. E. Schermerhorn	K	17	13	30	May 22		11
Second Lieut.	G. H. Gould	I	17	13	30	June 7		11
First Sergt.	H. H. Spelman	G	17	13	30	May 23		9
First Sergt.	A. J. Eccles	A	17	13	30	May 21		5
First Sergt.	W. E. C. Mayer	E	17	13	30	June 7		3
Corporal	G. A. Gardner	D	17	13	30	Oct. 2		2
Corporal	H. V. D. Black	B	17	13	30	May 22		8
Private	R. L. Kemble	K	17	13	30	Sept. 13	All comers.	3
Private	J. H. McKenney	C	17	13	30	Oct. 2		
Private	J. R. Cummings	A	17	13	30	May 21		5
Private	M. K. Miller	H	17	13	30	Sept. 13	All comers.	1
Private	G. B. Watts, Jr.	K	17	13	30	Aug. 4	M. B.	1
Private	G. T. Van Dusen	A	17	13	30	May 21		1
First Lieut.	H. C. Du Val	I	18	12	30	June 9	M. B.	11
Second Lieut.	W. B. Bradley	E	18	12	30	June 7		4
Corporal	F. C. Harriman	K	18	12	30	May 22		6
Private	H. Valentine	I	18	12	30	June 7		3
Private	A. Waydell	B	18	12	30	May 22		3
Private	F. A. Duffy	G	18	12	30	Aug. 18	M. B.	
Private	I. K. Taylor	I	18	12	30	June 7		5
Private	W. H. Van Kleeck, Jr.	F	18	12	30	May 23		5
Private	W. E. Marcus	H	18	12	30	Oct. 2		9
Private	B. S. De Garmendia	I	18	12	30	June 7		3
Private	C. E. Chapman	K	18	12	30	Aug. 25	M. B.	2
Private	F. A. Wood	E	18	12	30	Sept. 3	M. B.	2
Private	G. H. Brown, Jr.	K	18	12	30	Oct. 2		2
Sergeant	T. M. Halsey	H	19	11	30	May 23		9
Private	A. L. Leshar	I	19	11	30	June 7		2
Private	R. S. Holt, Jr.	H	19	11	30	May 23		6
Private	C. F. Bradbury	B	19	11	30	Nov. 6	M. B.	
Private	H. W. Fish	H	20	10	30	May 23		1
Private	J. G. Turnbull	G	20	10	30	July 4	M. B.	1
Private	G. S. Towle	D	20	10	30	May 24		1
Private	L. E. Harmon	E	21	9	30	Sept. 3	M. B.	4
Private	A. W. Stout	H	11	18	29	May 23		2
Private	W. Cunningham	B	11	18	29	Sept. 13	All comers.	4
Private	C. T. Leonard	B	12	17	29	May 22		3
Private	G. R. Burns	C	12	17	29	Oct. 2		1
Private	B. F. Hillery	C	12	17	29	Aug. 11	M. B.	6
Private	A. J. Saalfeld	D	12	17	29	May 24		3
Private	A. L. North	D	12	17	29	Oct. 2		4
Private	G. E. Fountain	B	12	17	29	May 22		5
Private	J. Corner	H	13	16	29	May 23		1
Private	F. S. Blackall	H	13	16	29	May 23		1

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. D. Sparkman	G	13	16	29	Nov. 6	M. B.	1
Private	O. D. Thees	E	13	16	29	June 7		5
Private	B. F. Lent	D	14	15	29	Oct. 2		1
Private	H. W. Todd	G	14	15	29	June 9	M. B.	1
Private	H. G. Trevor	K	14	15	29	July 28	M. B.	3
Private	C. P. Geddes	B	14	15	29	May 23		1
Sergeant	G. J. Weaver	I	15	14	29	Sept. 29	M. B.	3
Corporal	W. R. Ware	F	15	14	29	May 24		7
Private	W. M. Baldwin	K	15	14	29	May 22		3
Private	J. F. Hobart	B	15	14	29	May 22		2
Private	A. J. Vaast	E	15	14	29	June 7		2
Private	H. J. Weber	B	15	14	29	May 22		1
Private	G. E. Molleson	I	15	14	29	July 14	M. B.	
Private	I. J. Benjamin	E	15	14	29	July 4	M. B.	
Private	E. Bissell, Jr.	H	15	14	29	Oct. 2		
Private	A. De Saldern	H	15	14	29	May 23		5
Private	G. H. De Witt	F	15	14	29	Oct. 2		1
Second Lieut.	E. T. Kirkland	K	16	13	29	June 9	M. B.	5
Private	H. Paré	I	16	13	29	June 7		1
Private	C. L. Jacquelin	G	16	13	29	July 4	M. B.	1
Private	W. C. Goffe	F	16	13	29	Oct. 2		
Private	J. R. Stewart	B	16	13	29	May 22		4
Private	T. J. O'Donohue	G	16	13	29	May 23		1
Sergeant	F. L. Van Benschoten	F	17	12	29	May 24		6
Corporal	A. H. Walton	A	17	12	29	Aug. 11	M. B.	2
Corporal	J. A. B. Stillings	C	17	12	29	Oct. 2		2
Private	C. A. J. Queckberner	A	17	12	29	June 23	M. B.	2
Private	C. C. Bailey	D	17	12	29	May 24		1
Private	J. F. Baudouine	B	17	12	29	Sept. 13	All comers.	1
Private	E. W. Youmans, Jr.	G	17	12	29	July 21	M. B.	1
Private	F. E. Duffy	G	17	12	29	July 14	M. B.	1
Private	W. G. Richards	I	17	12	29	June 7		1
Private	C. Macfarlan	F	17	12	29	July 4	M. B.	1
Private	H. C. Miller	E	17	12	29	June 7		3
Private	E. T. Palmenberg	A	17	12	29	May 21		3
Private	C. H. Lowerre, Jr.	E	17	12	29	Aug. 25	M. B.	
Private	J. A. Hunt	C	17	12	29	Oct. 2		10
Private	G. Schuyler	B	17	12	29	May 22		4
Private	A. M. Pressinger	H	17	12	29	Nov. 6	M. B.	
Private	J. W. Scott	C	17	12	29	Oct. 2		5
Private	E. S. Allen	B	17	12	29	Aug. 4	M. B.	5
Private	A. S. Gunn	A	17	12	29	May 21		1
Private	W. A. Dennison	I	17	12	29	June 7		1
Captain	D. A. Pollard	C	18	11	29	May 21		12
Sergeant	C. W. Kirby, Jr.	E	18	11	29	Aug. 18	M. B.	2
Corporal	G. Lucas	G	18	11	29	June 9	M. B.	2
Private	E. C. Anderson	A	18	11	29	May 21		3
Private	S. D. Folsom	I	18	11	29	Oct. 13	M. B.	10
Private	F. H. Crary	H	18	11	29	May 23		4
Private	G. H. Barlow	F	18	11	29	May 24		4
Private	C. S. Chapman	A	18	11	29	May 21		5
Private	C. E. Amerman	F	18	11	29	June 9	M. B.	5
Private	D. A. McLeod	H	18	11	29	Oct. 2		9
Private	H. C. Adams	B	18	11	29	May 22		2
Private	P. L. Livingston	K	18	11	29	May 22		2
Private	J. S. Woodhouse	F	18	11	29	May 24		1
Private	R. D. Todd	H	18	11	29	Oct. 2		1
Private	J. M. Jones	B	19	10	29	May 22		2
Private	W. T. F. Neely	H	19	10	29	May 23		1
Private	S. S. Van Kirk	C	19	10	29	July 4	M. B.	1
Private	R. T. Smith	A	19	10	29	Aug. 11	M. B.	
Private	H. C. Taylor	K	19	10	29	May 22		5
Private	W. W. Gillespie	D	19	10	29	Nov. 6	M. B.	1
Private	J. Ruppert, Jr.	B	20	9	29	May 22		1
Private	J. S. Beyea	B	20	9	29	Nov. 6	M. B.	
Private	R. H. Lockwood	A	9	19	28	Aug. 11	M. B.	
Corporal	G. W. Robinson	D	10	18	28	May 24		8
Private	H. H. Hatch	I	10	18	28	June 7		2
Private	W. L. Townsend	D	10	18	28	May 24		1
Private	C. S. McVey	G	10	18	28	May 23		3

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	R. Lindner	H	11	17	28	May 23		4
Sergeant	H. G. K. Heath	A	12	16	28	May 21		3
Corporal	M. J. Fitzmahony	G	12	16	28	Oct. 13	M. B.	6
Private	H. M. Orne	I	12	16	28	June 7		2
Private	W. F. Smith	C	12	16	28	June 9	M. B.	
Private	E. N. Whitson	F	12	16	28	June 9	M. B.	
Private	R. A. Lathrop	A	12	16	28	Aug. 11	M. B.	
Private	W. M. Morgan	H	12	16	28	May 23		10
Private	T. B. Paton	D	12	16	28	Aug. 25	M. B.	4
Corporal	C. L. Smith	C	13	15	28	Oct. 2		4
Corporal	H. L. Slade	K	13	15	28	May 22		4
Private	R. D. Neeson	B	13	15	28	May 22		2
Private	C. Coster	I	13	15	28	Oct. 13	M. B.	1
Private	G. B. Rumrill	D	13	15	28	May 24		1
Private	W. G. Roosevelt	A	13	15	28	May 21		
Private	J. Fox, Jr.	I	13	15	28	Oct. 27	M. B.	
Private	W. A. Jones, Jr.	G	13	15	28	Oct. 27	M. B.	1
Private	W. O'Brien	D	13	15	28	July 4	M. B.	1
Private	C. H. Reisig	E	13	15	28	Oct. 2		1
Private	B. F. Goodspeed	F	14	14	28	Aug. 11	M. B.	3
Private	W. Heyerdahl	C	14	14	28	May 21		1
Private	F. T. Hubbell	E	14	14	28	Aug. 25	M. B.	1
Private	E. L. Armstrong	A	14	14	28	Oct. 2		1
Private	A. M. Lawrence	I	14	14	28	Aug. 11	M. B.	
Private	P. V. Caesar	A	14	14	28	May 21		
Private	P. Kühne	K	14	14	28	Oct. 13	M. B.	3
Private	L. F. Dilleber	E	14	14	28	Sept. 3	M. B.	
Private	W. E. Ward	A	14	14	28	May 21		3
Private	C. F. Wiebusch	K	14	14	28	Sept. 3	M. B.	3
Private	F. E. Gallatin	K	14	14	28	Nov. 6	M. B.	
Private	B. A. Kellogg	G	14	14	28	Sept. 3	M. B.	
Sergeant	W. V. A. Mulhallon	I	15	13	28	June 7		4
Private	L. S. Rubira	E	15	13	28	June 7		2
Private	J. M. Thomas	K	15	13	28	May 22		2
Private	G. Bragaw	H	15	13	28	May 23		2
Private	A. F. Woods	G	15	13	28	May 23		1
Private	W. H. Sandt	I	15	13	28	June 7		1
Private	L. C. Ketchum	I	15	13	28	June 7		1
Private	J. J. Alexander	G	15	13	28	May 23		1
Private	T. K. Moffett	F	15	13	28	June 23	M. B.	
Private	R. L. Redfield	G	15	13	28	June 9	M. B.	
Private	C. W. Nichols	F	15	13	28	Nov. 6	M. B.	
Private	E. M. Youmans	F	15	13	28	Oct. 13	M. B.	
Private	J. A. Campbell	D	15	13	28	May 24		
Private	E. P. Warren	D	15	13	28	Oct. 2		3
Private	L. M. Segee	G	15	13	28	May 23		4
Private	H. T. Knowlton	F	15	13	28	Oct. 2		
Private	P. Farquhar	K	15	13	28	Oct. 13	M. B.	1
First Lieut.	W. S. Wilson	E	16	12	28	June 7		9
Private	J. H. Lee	C	16	12	28	July 28	M. B.	2
Private	A. H. Van Buskirk	E	16	12	28	May 22		1
Private	T. T. Brinckerhoff	E	16	12	28	Oct. 2		
Private	E. R. Lasell	D	16	12	28	Oct. 2		
Private	D. M. Van Vliet	H	16	12	28	May 23		4
Private	W. B. Odell	H	16	12	28	May 23		
Private	C. H. Kelley	D	16	12	28	July 14	M. B.	
Corporal	G. Finck	G	17	11	28	May 23		1
Corporal	I. S. Douglass	C	17	11	28	May 21		2
Private	T. J. Black, 2d	B	17	11	28	May 22		2
Private	W. B. Hardy	E	17	11	28	July 4	M. B.	2
Private	J. W. Schelpert	G	17	11	28	June 7		2
Private	D. O. Davenport	H	17	11	28	May 23		1
Private	J. B. Hibbard, Jr.	F	17	11	28	June 23	M. B.	1
Private	G. J. Ames	F	17	11	28	June 9	M. B.	1
Private	G. A. Thayer, Jr.	H	17	11	28	Aug. 25	M. B.	
Private	J. J. Higgins	G	17	11	28	May 23		7
Private	B. Hopkins	E	17	11	28	June 23	M. B.	5
Private	W. M. Johnson	H	17	11	28	Nov. 6	M. B.	
Private	F. A. Pleasant	E	17	11	28	June 7		
Private	W. W. Davenport	B	17	11	28	May 22		6

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. W. Butler.....	C	17	11	28	May 21		5
First Sergt.	F. G. Landon.....	I	18	10	28	June 7		6
Corporal	J. N. Stearns, Jr.....	I	18	10	28	June 7		6
Corporal	E. Y. Weber.....	I	18	10	28	June 7		5
Private	F. G. Roumage.....	B	18	10	28	May 22		2
Private	E. P. Jenkins.....	A	18	10	28	May 21		1
Private	J. G. Bert.....	C	18	10	28	May 2		12
Private	C. D. Watkins.....	F	18	10	28	May 24		4
Private	H. D. Steers.....	I	18	10	28	June 7		1
Q. M. Sergt.	W. M. Ballard.....	G	19	9	28	May 23		3
Q. M. Sergt.	P. A. Jeannot.....	A	19	9	28	June 23	M. B.	6
Private	H. C. Senior.....	H	19	9	28	Oct. 13	M. B.	
Private	W. W. Benjamin.....	H	19	9	28	May 23		
Private	C. H. Jackson.....	G	19	9	28	July 4	M. B.	3
Private	A. P. Hinton.....	K	19	9	28	Aug. 25	M. B.	5
Private	H. H. Drake.....	F	19	9	28	May 24	M. B.	5
Private	R. D. Andrews.....	H	9	18	27	May 23		3
First Sergt.	M. B. Stelle.....	F	10	17	27	May 24		6
Q. M. Sergt.	G. Gregory.....	H	10	17	27	May 23		7
Corporal	A. F. Stone.....	A	11	16	27	May 21		5
Private	E. Fish.....	H	11	16	27	Oct. 2		2
Private	G. F. Wiepert.....	G	11	16	27	Sept. 29	M. B.	1
Private	W. A. Pratt.....	I	11	16	27	Aug. 11	M. B.	1
Private	C. P. Thorp.....	G	11	16	27	May 23		
Private	C. Butler, 2d.....	F	11	16	27	Oct. 13	M. B.	
Private	L. E. Waterman, Jr.....	D	11	16	27	Nov. 6	M. B.	
Private	A. B. Ely.....	F	11	16	27	June 23	M. B.	1
Private	H. H. Lemon.....	F	12	15	27	June 9	M. B.	3
Private	J. Halk.....	B	12	15	27	May 22		3
Private	P. Hayes.....	C	12	15	27	May 21		2
Private	D. P. Stanton.....	G	12	15	27	June 23	M. B.	2
Private	H. M. Clarke.....	G	12	15	27	Oct. 13	M. B.	1
Private	T. E. Stewart.....	A	12	15	27	Aug. 25	M. B.	
Private	R. G. Sherman.....	C	12	15	27	May 21		
Private	W. H. Allen.....	F	12	15	27	Aug. 25	M. B.	4
Sergeant	E. A. Wolff.....	G	13	14	27	May 23		1
Corporal	F. W. Budd.....	F	13	14	27	May 24		7
Private	J. A. Murray.....	A	13	14	27	Nov. 6	M. B.	4
Private	L. W. Miller.....	K	13	14	27	May 22		4
Private	F. B. Orlich.....	D	13	14	27	May 24		
Private	W. W. Capers, Jr.....	C	13	14	27	May 21		
Private	S. A. Harriman.....	K	13	14	27	May 22		7
Private	J. L. Bull.....	F	13	14	27	May 24		
Private	L. B. Burnett.....	I	13	14	27	Oct. 2		1
Private	R. D. McGreevey.....	G	13	14	27	May 23		2
Sergeant	C. M. Baker.....	B	14	13	27	May 22		8
Corporal	C. O. Toussaint.....	K	14	13	27	May 22		3
Private	J. S. Herrman.....	C	14	13	27	May 21		3
Private	J. Williams.....	H	14	13	27	May 23		9
Private	H. B. Welsh.....	B	14	13	27	Oct. 27	M. B.	1
Private	J. W. Harriman.....	B	14	13	27	Sept. 13	All comers..	1
Private	J. T. Wiggins.....	A	14	13	27	Aug. 11	M. B.	1
Private	F. M. Orton.....	G	14	13	27	May 23		1
Private	A. C. Ketcham.....	K	14	13	27	May 22		1
Private	L. De W. Hollub.....	G	14	13	27	Sept. 3	M. B.	1
Private	C. S. Dodge.....	K	14	13	27	Oct. 27	M. B.	1
Private	F. L. Donohue.....	G	14	13	27	Nov. 6	M. B.	1
Corporal	J. H. Townsend.....	H	15	12	27	May 23		4
Corporal	W. A. Jones.....	H	15	12	27	May 9		7
Private	E. Clark, Jr.....	B	15	12	27	May 22		4
Private	J. P. Dunn.....	C	15	12	27	Oct. 13	M. B.	
Private	J. M. Tallman.....	A	15	12	27	May 21		5
Private	J. F. Quin.....	F	15	12	27	June 23	M. B.	1
Private	G. W. Lewis.....	I	15	12	27	June 7		11
Private	F. G. Du Bois.....	B	15	12	27	May 22		3
Private	J. M. Hare.....	E	15	12	27	June 7		2
Private	F. Vores.....	E	15	12	27	June 7		2
Private	W. F. Zittel.....	E	15	12	27	June 7		1
Private	E. C. Lambert.....	K	15	12	27	Sept. 29	M. B.	1
Private	C. H. Enders.....	G	15	12	27	May 23		

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	E. E. Mapes	F	15	12	27	July 4	M. B.	1
Private	J. S. H. Petit	D	15	12	27	July 14	M. B.	
Private	R. W. Pinder	D	15	12	27	Aug. 11	M. B.	
Private	J. Spies	C	15	12	27	Aug. 11	M. B.	6
Private	J. S. Dodge	C	15	12	27	May 21		6
Corporal	W. H. Macfarlan	F	16	11	27	May 24		5
Corporal	J. F. Theis	C	16	11	27	May 21		8
Sergeant	J. Kidney	E	16	11	27	Aug. 4	M. B.	1
Corporal	W. J. Gilpin	E	16	11	27	June 7		3
Corporal	T. W. Ball	C	16	11	27	May 21		3
Corporal	M. I. Fox	E	16	11	27	June 7		2
Private	H. L. Bloomfield	K	16	11	27	July 21	M. B.	1
Private	W. E. F. Smith	E	16	11	27	June 7		1
Private	J. L. McCammon	F	16	11	27	May 24		1
Private	J. W. Hallenbeck	I	16	11	27	Sept. 29	M. B.	
Private	A. L. Cort	B	16	11	27	May 22		6
Private	G. J. Daniell	G	16	11	27	Sept. 29	M. B.	
Private	W. D. Holmes	D	16	11	27	Oct. 2		
Private	R. T. Varnum	K	16	11	27	May 22		3
Private	M. B. Snevily	G	16	11	27	May 23		5
Sergeant	H. S. Clark	K	17	10	27	May 22		7
Corporal	G. M. Gray	K	17	10	27	May 22		4
Corporal	F. W. Colwell	F	17	10	27	May 24		5
Private	E. S. Young	G	17	10	27	May 23		2
Private	S. R. Hayter	E	17	10	27	Oct. 13	M. B.	1
Private	E. P. Brock	C	17	10	27	May 21		1
Private	O. M. Beach	B	17	10	27	Oct. 2		
Private	T. H. Lowrerre	E	17	10	27	Aug. 11	M. B.	
Private	N. Doyle	A	17	10	27	Nov. 6	M. B.	3
Private	T. Dwight	H	17	10	27	July 21	M. B.	
Private	M. C. Palmer	I	17	10	27	Oct. 2		
Private	G. Vassar, Jr.	H	17	10	27	Sept. 13	All comers.	5
Private	T. R. Barton	A	17	10	27	May 21		5
Private	G. J. Kilgen	B	17	10	27	Oct. 2		1
Captain	G. B. Rhoads	E	18	9	27	June 23	M. B.	10
Private	J. Bleecker, Jr.	K	18	9	27	Oct. 2		4
Private	J. P. Murray	A	18	9	27	June 23	M. B.	5
Private	C. W. Henry	A	18	9	27	May 21		5
Private	W. V. Stevens	F	18	9	27	May 24		1
Private	J. Corcoran	A	18	9	27	Oct. 2		11
Private	C. O. Woodhouse, Jr.	F	18	9	27	May 24		1
Private	E. Davidson	I	18	9	27	June 7		1
Private	J. A. Neely	H	18	9	27	Oct. 2		1
Private	H. E. Stevens, Jr.	E	18	9	27	Nov. 6	M. B.	
Private	T. G. Lee	E	18	9	27	Oct. 2		
Private	W. A. McCreery	K	18	9	27	June 9	M. B.	8
Private	E. L. Nicoll	H	18	9	27	May 9		3
Private	G. B. Barcalow	B	18	9	27	May 22		6
Sergeant	A. L. Wickert (L. G. G.)	N.C.S	19	8	27	Sept. 29	M. B.	5
Private	W. M. Moore	I	19	8	27	June 7		2
Private	F. J. Burke	E	19	8	27	June 7		2
Private	F. Blackhurst	A	19	8	27	May 21		2
Private	H. Ivison	I	19	8	27	Oct. 27	M. B.	1
Private	A. D. Emery	G	19	8	27	May 23		
Private	W. J. Andrus	H	19	8	27	May 23		4
Private	G. Oakley	A	19	8	27	Aug. 11	M. B.	
Corporal	E. C. Denison	I	20	7	27	June 23	M. B.	5
Private	T. C. Dougherty	D	20	7	27	Nov. 6	M. B.	
Private	T. Dougherty	D	20	7	27	Oct. 2		1
Private	F. Bensel	A	21	6	27	Oct. 2		3
Private	W. A. Leonard	B	8	18	26	June 9	M. B.	
Private	T. C. Chalmers	F	8	18	26	May 24		
Sergeant	W. A. Jennings	E	9	17	26	June 7		9
Private	R. M. Lyman	I	10	16	26	Aug. 25	M. B.	1
Private	H. S. Morris	E	10	16	26	Oct. 2		
Private	W. H. Picken	A	11	15	26	Aug. 11	M. B.	1
Private	J. H. Taylor	F	11	15	26	July 14	M. B.	1
Private	J. W. Arthur	F	11	15	26	May 24		6
Corporal	E. B. Fernald	E	12	14	26	June 7		1
Corporal	L. E. Vannier	A	12	14	26	May 21		3

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Colonel	E. Clark	Field	12	14	26	May 21		9
Private	J. W. A. Abell	E	12	14	26	June 7		2
Private	H. Desendorf	F	12	14	26	May 24		2
Private	X. Delile	C	12	14	26	May 21		2
Private	C. H. Bowron	F	12	14	26	Oct. 13	M. B.	
Private	J. T. Wainwright	K	12	14	26	May 22		3
Private	A. Bastianelli	B	12	14	26	May 22		5
Corporal	W. A. Taylor	I	13	13	26	June 7		9
Private	W. H. Whittall	G	13	13	26	May 23		2
Private	C. W. Smith, Jr.	I	13	13	26	June 7		1
Private	M. E. Wadleigh	E	13	13	26	June 7		
Private	G. S. Loder	H	13	13	26	May 23		3
Private	A. D. Dederick	E	13	13	26	Oct. 2		5
Sergeant	J. D. Ford	F	14	12	26	May 24		10
Private	C. S. Bussé	F	14	12	26	May 24		3
Private	P. B. Young	F	14	12	26	May 24		2
Private	J. H. Dimond	H	14	12	26	May 23		1
Private	B. McE. Schmidt	K	14	12	26	Sept. 13	All comers.	1
Private	G. C. Parkinson	A	14	12	26	June 23	M. B.	1
Private	U. Adams, Jr.	D	14	12	26	Oct. 2		1
Private	W. H. Lloyd	B	14	12	26	May 22		1
Private	I. D. Isham	D	14	12	26	May 24		1
Private	S. K. Watts	G	14	12	26	May 23		
Private	R. P. Williams	H	14	12	26	June 9	M. B.	
Private	H. W. Warner	K	14	12	26	Oct. 27	M. B.	
Private	J. W. Cary, Jr.	K	14	12	26	June 23	M. B.	
Private	H. E. Fox	D	14	12	26	May 24		4
Private	R. H. Lawrence	I	14	12	26	June 7		4
Private	J. D. McEwen	E	14	12	26	Nov. 6	M. B.	
Private	A. Fitch	C	14	12	26	May 21		5
Private	H. Foot	E	14	12	26	Oct. 13	M. B.	1
Private	B. S. Peck	F	14	12	26	June 7		1
Private	W. B. Randall	H	14	12	26	May 23		1
Sergeant	E. C. Ray, Jr. (Q. M. S.)	N.C.S	15	11	26	Oct. 2		
Corporal	C. A. Appleton	F	15	11	26	May 24		5
Corporal	J. H. G. Baker	E	15	11	26	June 7		1
Private	DeW. C. Wheeler, Jr.	F	15	11	26	May 24		1
Private	F. A. Ehret	C	15	11	26	May 21		1
Private	A. Taylor	I	15	11	26	June 7		1
Private	H. L. Hotchkiss, Jr.	I	15	11	26	June 7		1
Private	A. Stevens	F	15	11	26	May 24		
Private	G. L. Andrus	E	15	11	26	Aug. 25	M. B.	4
Private	S. V. Hoffman	K	15	11	26	Sept. 29	M. B.	
Private	E. B. Oreutt, Jr.	C	15	11	26	Nov. 6	M. B.	1
Sergeant	G. D. Cook	A	16	10	26	July 14	M. B.	5
Private	V. G. Hall	K	16	10	26	July 28	M. B.	3
Private	S. F. Lefferts	K	16	10	26	July 28	M. B.	2
Private	P. B. Jennings	F	16	10	26	May 24		2
Private	R. Jacob	K	16	10	26	Sept. 29	M. B.	2
Private	C. H. Cottier	F	16	10	26	Oct. 13	M. B.	1
Private	H. J. Dietz	B	16	10	26	May 22		1
Private	C. H. Arnold	B	16	10	26	May 22		1
Private	E. H. Coe	I	16	10	26	July 14	M. B.	
Private	U. S. Ward	G	16	10	26	May 23		
Private	B. S. Cooke	K	16	10	26	Sept. 29	M. B.	3
Private	G. M. Franks	C	16	10	26	Oct. 2		
Private	B. B. Sloan	K	16	10	26	July 14	M. B.	3
Private	J. Miller	C	16	10	26	May 21		5
Private	R. S. Hayes	A	16	10	26	May 21		5
Private	J. Gregory, Jr.	B	16	10	20	Oct. 2		1
Private	L. B. Rader	C	16	10	26	May 21		1
Private	O. T. Phillips	C	16	10	26	May 21		1
Q. M. Sergt.	H. Everdell	D	17	9	26	May 24		2
Corporal	J. H. Clark	B	17	9	26	May 22		6
Private	J. H. Davidson	C	17	9	26	Sept. 3	M. B.	9
Private	G. G. Ward, Jr.	B	17	9	26	May 22		2
Private	J. Laimbeer, Jr.	G	17	9	26	May 23		2
Private	O. T. Wenige	D	17	9	26	May 24		1
Private	J. H. W. Strong	K	17	9	26	May 22		1
Private	A. T. Strauch	E	17	9	26	June 7		

SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	P. R. Irving	K	17	9	26	July 28	M. B. ....	...
Private	G. Clarke, Jr.	H	17	9	26	May 23	.....	3
Private	J. D. Thornton	E	17	9	26	June 7	.....	4
Private	J. L. Beyea	K	17	9	26	May 22	.....	4
Private	R. N. Goodrich	G	17	9	26	May 23	.....	1
Private	C. F. R. Drake	F	17	9	26	Oct. 2	.....	1
Captain	H. S. Steele	B	18	8	26	July 23	M. B.	11
Second Lieut.	F. Bouker	D	18	8	26	Oct. 13	M. B.	7
First Sergt ...	J. W. Carter	C	18	8	26	May 21	.....	7
Sergeant	W. Sprague	C	18	8	26	May 21	.....	7
Sergeant	A. M. Hearn	C	18	8	26	May 21	.....	6
Corporal	A. F. Pfeiffer	E	18	8	26	June 7	.....	4
Private	H. E. McLewee	C	18	8	26	May 21	.....	2
Private	DeW. C. Falls, Jr.	K	18	8	26	May 22	.....	2
Private	J. D. T. Traill	H	18	8	26	May 23	.....	2
Private	W. S. Lent	I	18	8	26	Oct. 27	M. B.	3
Private	G. G. Brinkerhoff, Jr.	F	18	8	26	May 24	.....	4
Private	E. N. Nichols	F	18	8	26	June 9	M. B.	5
Sergeant	W. H. Folsom	I	19	7	26	June 7	.....	10
Private	T. B. Aldrich	I	19	7	26	June 7	.....	...
Private	W. K. Greene	F	19	7	26	May 24	.....	...
Captain	J. T. Harper	I	20	6	26	June 7	.....	9
Private	A. E. Bechstein	E	20	6	26	June 7	.....	1
Private	C. A. Darling	F	20	6	26	May 24	.....	4
Private	A. F. Townsend	F	8	17	25	May 24	.....	1
Private	J. S. Howell	E	8	17	25	June 7	.....	1
Private	J. W. French	I	9	16	25	Aug. 18	M. B. ....	...
Private	G. Bain	D	9	16	25	Oct. 2	.....	2
Private	F. A. Pollack	H	9	16	25	May 23	.....	2
Private	J. L. Van Ness	G	9	16	25	May 23	.....	1
Private	W. F. Moffett	I	10	15	25	Oct. 27	M. B. ....	...
Private	R. F. Morrison	B	10	15	25	May 22	.....	6
Private	H. Batier, Jr.	H	10	15	25	May 23	.....	2
Private	F. O'Byrne	A	10	15	25	May 21	.....	5
Private	G. B. Menepely	E	10	15	25	Sept. 3	M. B.	1
Private	G. A. Bright	F	10	15	25	May 24	.....	3
Corporal	F. R. Lee	C	11	14	25	June 9	M. B.	5
Private	J. Dowd	I	11	14	25	Sept. 29	M. B.	1
Private	R. O. Pennell	D	11	14	25	May 24	.....	2
Private	C. B. Little	H	11	14	25	May 23	.....	2
Private	C. P. Sackett	F	11	14	25	May 24	.....	2
Private	L. Bender	E	11	14	25	May 21	.....	1
Private	A. T. Moore	E	11	14	25	June 7	.....	3
Private	F. J. Jehan	D	11	14	25	Aug. 25	M. B. ....	...
Private	R. M. Phillips	G	12	13	25	Oct. 13	M. B. ....	...
Private	W. E. Stanley	B	12	13	25	Oct. 27	M. B. ....	...
Private	F. M. Warner	K	12	13	25	Sept. 29	M. B. ....	...
Private	S. Carlton	I	12	13	25	Oct. 27	M. B. ....	...
Private	F. Link, Jr.	E	12	13	25	June 7	.....	...
Private	E. W. Emery	I	12	13	25	May 23	.....	1
Private	E. R. Carter	G	12	13	25	May 23	.....	2
Private	S. P. Lasell	D	12	13	25	July 4	M. B.	1
Private	J. Schawel	D	12	13	25	Oct. 13	M. B.	1
Private	C. E. Mitchell	D	12	13	25	Oct. 27	M. B.	1
Corporal	E. P. Sperry	F	13	12	25	July 28	M. B.	5
Private	H. R. Brinkerhoff	F	13	12	25	May 24	.....	1
Private	G. N. Stanton	I	13	12	25	June 7	.....	2
Private	J. Buck, Jr.	H	13	12	25	May 23	.....	2
Private	H. T. Warren	G	13	12	25	July 4	M. B.	1
Private	I. C. Westlake	E	13	12	25	June 7	.....	1
Private	G. L. Varker	I	13	12	25	June 7	.....	1
Private	R. J. Kenworthy	A	13	12	25	Aug. 11	M. B.	1
Private	V. Heyerdahl	C	13	12	25	May 21	.....	...
Private	H. P. Brush	G	13	12	25	May 23	.....	3
Private	F. McCoy	C	13	12	25	May 21	.....	4
Private	H. N. Tiemann	E	14	11	25	Sept. 3	M. B. ....	...
Private	G. Fickinger	C	14	11	25	May 21	.....	...
Private	C. G. Howard	E	14	11	25	June 7	.....	4
Private	O. Meyer	C	14	11	25	Aug. 11	M. B. ....	...
Private	N. Morris	K	14	11	25	May 22	.....	1

SEVENTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	L. S. Miller	F	14	11	25	Oct. 2		1
Private	F. Seggerman	B	14	11	25	May 22		2
Private	H. C. Wiltshaw	B	14	11	25	Oct. 13	M. B.	1
Private	D. McK. Livingston	K	14	11	25	Sept. 3	M. B.	1
Private	F. W. Rundle	C	14	11	25	Oct. 2		1
Private	W. A. French	A	15	10	25	May 21		13
Private	F. B. Gillespie	G	15	10	25	May 23		3
Private	W. E. Arrowsmith	A	15	10	25	July 21	M. B.	2
Private	A. C. Clarkson	C	15	10	25	Oct. 27	M. B.	1
Private	P. Halstead	C	15	10	25	May 21		1
Second Lieut.	J. J. McKenna	A	16	9	25	July 14	M. B.	8
Sergeant	W. P. Atkinson	G	16	9	25	June 9	M. B.	1
Corporal	A. B. Rich	A	16	9	25	July 14	M. B.	2
Private	D. Betts	F	16	9	25	June 23	M. B.	1
Private	D. H. Close	A	16	9	25	Aug. 11	M. B.	1
Private	L. J. Lee	B	16	9	25	May 22		1
Private	W. A. Hearn	C	16	9	25	Nov. 6	M. B.	1
Private	G. W. Esslinger	B	16	9	25	May 22		1
Private	H. Coburn, Jr.	C	16	9	25	May 21		1
Private	R. S. Minturn	K	16	9	25	May 22		1
Private	G. McLean	E	16	9	25	June 7		1
Private	E. J. Laidlaw	K	16	9	25	Oct. 2		
Private	A. Shumway, Jr.	H	16	9	25	May 23		9
Private	A. M. Simpson	E	16	9	25	June 7		2
Private	T. H. Burchell	A	16	9	25	July 14	M. B.	2
Private	S. W. Adams	D	16	9	25	July 14	M. B.	5
Corporal	W. H. Allen	K	17	8	25	May 22		5
Sergeant	A. C. Clayton	I	17	8	25	Sept. 3	M. B.	6
Private	W. R. Bassett	B	17	8	25	May 22		6
Private	S. S. Earle	D	17	8	25	Nov. 6	M. B.	
Private	E. Phelan	C	17	8	25	July 4	M. B.	1
Private	I. W. Lore	A	17	8	25	May 21		11
Private	C. R. Shaw	C	17	8	25	May 21		1
Private	F. M. Comstock	F	17	8	25	Oct. 27	M. B.	
Private	M. H. Woodworth	D	17	8	25	May 24		
Private	A. E. Wood	E	17	8	25	June 7		3
Corporal	W. C. Adams	I	18	7	25	June 7		2
Corporal	J. A. Morton	K	18	7	25	May 22		5
Private	G. E. Sterry, Jr.	I	18	7	25	June 7		1
Private	F. C. Wightman	A	18	7	25	May 21		1
Private	J. Frye	I	18	7	25	July 21	M. B.	1
Private	W. F. Stratton	A	18	7	25	July 14	M. B.	3
Private	E. W. Bennett	C	18	7	25	May 21		3
Private	H. G. McFadden	E	18	7	25	June 7		5
Corporal	H. C. Lima	D	19	6	25	Sept. 3	M. B.	2
Private	H. L. Emerson	A	19	6	25	May 21		
Private	J. F. Simmons	B	19	6	25	June 9	M. B.	1
Private	D. M. Billings	I	20	5	25	June 7		
Private	L. G. Frankau	E	20	5	25	Aug. 25	M. B.	8
Private	F. F. Ames	I	21	4	25	Oct. 27	M. B.	

Total 919

EIGHTH REGIMENT.

(Figure of merit..... 34.75.)

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	M. P. Ross*	G	22	22	44	Sept. 11	C. M. C.....	13
Corporal	Jules Clement, Jr.	E	20	20	40	Sept. 17	.....	1
Sergeant	Louis Haubennestel	I	18	20	38	May 10	.....	11
Colonel	G. D. Scott	Field	20	18	38	Sept. 17	.....	13
Private	W. J. Costello	H	20	17	37	May 8	.....	5
First Serg't	T. P. McKenna	G	19	17	36	June 19	.....	5
Captain	Edw. Barker (I. R. P.)	Staff	18	17	35	June 19	.....	13
First Serg't	Charles Allen	E	18	17	35	June 19	.....	5
First Serg't	J. W. Morgan	B	20	15	35	June 19	.....	9
Sergeant	H. A. Freeman	D	10	24	34	May 10	.....	1
First Serg't	James Maher	I	17	17	34	June 19	.....	1
Private	Charles Morton	C	14	19	33	June 19	.....	1
Private	L. J. O'Connor	E	14	19	33	Sept. 17	.....	2
Q. M. Serg't	R. B. Simms	C	16	17	33	Sept. 17	.....	2
Second Lieut.	I. Freeman	C	18	15	33	June 19	.....	2
Private	J. A. Waters	H	13	18	31	May 10	.....	13
Sergeant	J. R. Murphy (O. S.)	NCS	17	14	31	June 19	.....	2
Private	D. Robertson	B	17	14	31	June 19	.....	6
First Lieut.	G. B. McClellan	E	18	13	31	June 19	.....	1
Sergeant	R. B. Breen, Jr.	NCS	15	15	30	Sept. 17	.....	1
Private	Alexander Beeley	C	16	14	30	Sept. 17	.....	3
Private	P. W. Meinecke	D	16	14	30	May 10	.....	1
Lieutenant	J. L. Myers	G	17	13	30	June 19	.....	1
Captain	E. A. Oothout	E	18	12	30	May 5	.....	3
Private	J. J. Gallagher	D	18	12	30	Sept. 17	.....	1
Private	W. A. Shears	E	12	17	29	Sept. 17	.....	3
Sergeant	G. D. Scott, Jr.	NCS	16	12	29	Sept. 17	.....	7
Captain	A. A. Oates	G	14	15	29	June 19	.....	1
Sergeant	J. J. Collins	D	17	12	29	May 9	.....	5
Captain	S. Hemingway (As't Surg.)	Staff	18	11	29	Sept. 17	.....	1
Private	Thomas Handibode	I	20	9	29	June 19	.....	3
Major	Henry Chauncey, Jr.	Field	12	16	28	June 19	.....	1
Second Lieut.	J. T. Slingerland	B	15	13	28	Nov. 6	C. M. C.....	1
Private	M. Murphy	D	16	12	28	June 19	.....	1
Private	Francis Murphy	I	10	17	27	June 19	.....	1
Second Lieut.	G. P. Cammann	I	14	13	27	June 19	.....	1
Corporal	Jesse Collins	D	14	13	27	June 19	.....	1
Sergeant	F. Buckhorn	H	15	12	27	June 19	.....	1
Private	G. H. Van Ness	G	15	12	27	June 19	.....	1
Private	George Owen	D	17	10	27	Sept. 17	.....	1
Private	J. P. Dugan	F	8	18	26	Sept. 17	.....	1
Private	J. J. Reilly	I	9	17	26	June 19	.....	1
Lieutenant	S. J. Schuyler	I	13	13	26	Sept. 17	.....	10
Captain	W. H. De War	I	13	11	26	June 19	.....	2
Private	James McCredy	G	15	11	26	June 19	.....	2
Corporal	H. A. Rebello	F	16	10	26	Sept. 17	.....	1
First Lieut.	E. A. Barker	B	17	9	26	June 19	.....	9
Lieut.-Col	F. A. Schilling	Field	18	8	26	Sept. 17	.....	1
Private	H. D. S. Monroe	I	18	8	26	Sept. 17	.....	1
Private	P. Walsh	I	18	8	26	June 19	.....	1
Private	E. S. Borns	C	9	16	25	Sept. 17	.....	1
Captain	Knight Neftel	F	10	15	25	June 19	.....	3
Sergeant	F. H. Hewlett	I	12	13	25	June 19	.....	1
Private	T. J. Confrey	E	12	13	25	June 19	.....	1
Sergeant	E. E. Conklin	E	13	12	25	June 19	.....	2
Sergeant	A. Jacobson	B	13	12	25	June 19	.....	1
Private	A. J. Myers	G	14	11	25	Nov. 6	C. M. C.....	1
Sergeant	G. F. Kemp	I	17	8	25	Sept. 17	.....	2
Sergeant	W. F. Germaine	D	19	6	25	June 19	.....	1
Private	W. F. Burke	E	19	6	25	June 19	.....	1
Private	L. Rinaldi	B	21	4	25	Sept. 17	.....	1

Total 61.

NINTH REGIMENT.

(Figure of merit..... 39.76.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Second Lieut.	J. M. Macconnell*	H	22	23	45	Aug. 4	C. M. C.....	1
First Lieut.	C. E. Kohlberger*	I	20	23	43	June 8	.....	13
Sergeant	W. Seward, 3d (O. S.)	N.C.S	21	20	41	June 8	.....	3
Private	N. D. Ward	A	19	21	40	Nov. 6	C. M. C.....	13
Private	T. Allen	I	17	21	38	Nov. 6	C. M. C.....	.....
Captain	W. R. Clough	H	19	19	38	Aug. 18	C. M. C.....	3
Sergeant	H. Bullwinkel	I	18	19	37	Aug. 2	.....	3
Sergeant	H. Debes	H	19	18	37	June 8	.....	3
Second Lieut.	W. H. Ehrmann.	F	20	17	37	July 14	C. M. C.....	5
Private	W. Lynn	D	16	20	36	June 8	.....	.....
Corporal	A. Wilcocks.	G	18	18	36	Aug. 2	.....	1
Captain	A. H. Doty (Ass't Surg.)	Staff	21	15	36	June 8	.....	5
Private	C. A. Peterson	B	17	18	35	Sept. 4	.....	1
Corporal	G. M. Roeser	H	18	17	35	Sept. 4	.....	1
Captain	G. T. Lorigan	A	19	16	35	July 14	C. M. C.....	9
Sergeant	Chas. Heese	E	18	16	34	Sept. 4	.....	6
Private	S. Gorman	G	19	15	34	June 8	.....	1
Private	C. E. Weiman	K	20	14	34	Oct. 10	.....	1
Q. M. Sergt.	R. J. McWilliams.	I	14	19	33	June 8	.....	2
Private	D. F. Holmes.	F	14	19	33	June 8	.....	.....
Private	Wm. McDonald.	H	15	18	33	Aug. 15	.....	.....
Sergeant	W. A. D. Holmes.	F	19	14	33	June 8	.....	2
Private	H. Kolkebacke	K	19	14	33	Oct. 13	C. M. C.....	2
Corporal	J. H. Todd	H	20	13	33	May 10	.....	3
Private	W. E. Monroe	H	20	13	33	Aug. 2	.....	1
Sergeant	Geo. Geiger, Jr.	I	13	19	32	Aug. 2	.....	2
Captain	H. W. Leonard	I	14	18	32	Aug. 2	.....	2
Sergeant	W. J. Dillon	E	14	18	32	Sept. 4	.....	3
First Lieut.	Franklin Bartlett.	E	15	17	32	June 8	.....	4
Private	A. S. Norman	B	15	17	32	June 8	.....	4
Private	L. H. Meessig.	A	17	15	32	Sept. 4	.....	.....
Private	W. Rowe	I	17	15	32	Sept. 4	.....	.....
First Sergt.	H. A. Harris.	A	18	14	32	July 14	C. M. C.....	2
Private	W. E. Keegan	A	18	14	32	Aug. 2	.....	.....
Private	M. J. Browne	F	12	19	31	June 8	.....	1
Private	C. Heerd	B	15	16	31	July 18	.....	.....
Private	J. Roberts	A	15	16	31	June 8	.....	1
Private	J. C. Pothoff	B	16	15	31	June 8	.....	3
Private	J. H. Craft	A	19	12	31	Sept. 19	.....	.....
Private	Jac. Lange	I	9	21	30	Nov. 6	C. M. C.....	1
Corporal	E. F. Clark	H	15	15	30	July 18	.....	4
Private	H. N. Ely	I	15	15	30	June 8	.....	1
Sergeant	F. H. Hoyt	A	16	14	30	Nov. 6	C. M. C.....	5
Private	M. Lehman	A	16	14	30	Sept. 4	.....	5
Sergeant	J. Hewitt	K	17	13	30	June 8	.....	.....
Sergeant	H. C. Yager (S. B.)	N.C.S	17	13	30	May 12	.....	3
Private	J. J. Strong	G	17	13	30	Aug. 2	.....	2
Captain	C. N. Thompson	Staff.	18	12	30	June 8	.....	.....
Sergeant	J. H. Hall (S. B.)	N.C.S	18	12	30	June 8	.....	2
Private	P. Donnelly	B	19	11	30	June 8	.....	2
Second Lieut.	J. W. West.	B	21	9	30	June 8	.....	1
Private	H. Slurff	D	21	9	30	June 8	.....	6
Captain	K. C. Gibson (I. R. P.)	Staff.	9	20	29	May 4	.....	2
First Serg.	W. F. Schultz	E	12	17	29	Aug. 2	.....	1
Corporal	J. Van Hagin	A	12	17	29	Aug. 2	.....	1
Private	M. J. Mahoney	A	12	17	29	Aug. 2	.....	.....
Corporal	Charles Wilkinson	F	15	14	29	June 8	.....	2
Private	John Hay	F	15	14	29	June 8	.....	2
Sergeant	G. Wiedman (C. S.)	N.C.S	16	13	29	Sept. 4	.....	3
Private	E. Bogurt	K	16	13	29	Sept. 11	C. M. C.....	.....
Private	P. H. Freyer	H	16	13	29	Sept. 4	.....	.....
Private	J. Markwalter	B	16	13	29	June 8	.....	.....
Private	M. Wenz, Jr.	H	16	13	29	May 12	.....	1
Private	Jno. Connolly.	E	17	12	29	Aug. 2	.....	.....
Private	W. Lambert	D	17	12	29	June 8	.....	.....
Captain	Wash. Wilcocks	G	18	11	29	Nov. 6	C. M. C.....	4
Corporal	V. Cornee	F	18	11	29	Aug. 2	.....	5
Private	Jas. Kidney	B	18	11	29	Sept. 4	.....	1

NINTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	G. E. G. Peters	B	18	11	29	Oct. 27	C. M. C.	1
First Sergt.	W. F. J. Higgins	F	20	9	29	Nov. 6	C. M. C.	2
First Lieut.	Robt. Worrell	F	12	16	28	Aug. 2		2
Sergeant	P. G. Jefferys (R. G. G.)	N.C.S	14	14	28	June 8		2
Private	E. R. Howard	G	14	14	28	Oct. 5		1
Private	F. Sylvester	F	14	14	28	June 8		1
Corporal	M. Murphy	A	15	13	28	Aug. 2		
Private	Jno. Noble	F	15	13	28	Nov. 6	C. M. C.	
Sergt.-Maj.	W. H. Van Vleck	N.C.S	16	12	28	July 18		11
Sergeant	H. E. Gilmore	K	16	12	28	June 8		4
Second Lieut.	G. A. S. Weiners	A	17	11	28	June 8		2
First Lieut.	Y. D. Dechert (Adj't.)	Staff.	18	10	28	June 8		5
Sergeant	E. L. Chase	K	18	10	28	Sept. 4		1
Private	J. H. Brickwedel	I	18	10	28	Sept. 4		
Private	D. Lagomarsini	I	18	10	28	Sept. 4		1
Private	J. Benkenstein	A	11	16	27	Sept. 4		
Private	G. W. Murphy	H	11	16	27	June 23	C. M. C.	
Q. M. Sergt.	E. W. Watkins	B	12	15	27	Aug. 2		8
Private	J. H. MacGinn	K	12	15	27	July 14	C. M. C.	5
Sergeant	J. A. Connor	G	14	13	27	June 13		2
Private	G. L. Walker	K	14	13	27	Sept. 4		
Second Lieut.	E. J. Winterwith	I	15	12	27	Sept. 4		2
First Sergt.	R. F. Morris	H	15	12	27	May 10		2
Corporal	H. S. Hanford	K	15	12	27	Sept. 4		2
Private	J. T. Betts	H	15	12	27	June 8		
Captain	S. E. Japha	E	17	10	27	Aug. 2		10
Private	E. D. Traphagen	B	17	10	27	Sept. 29	C. M. C.	
First Lieut.	D. B. Pratt (Q. M.)	Staff	18	9	27	June 8		2
Private	W. E. Bryde	F	18	9	27	June 8		4
Private	J. H. H. Spruck	B	18	9	27	Oct. 3		
Sergeant	J. M. Brandon	A	19	8	27	July 14	C. M. C.	3
Private	F. Buck	E	9	17	26	Sept. 4		
Private	W. H. Ruker	A	9	17	26	Sept. 19		
Private	C. Arbano	I	10	16	26	Nov. 6	C. M. C.	1
Colonel	William M. Seward	Field	11	15	26	June 8		11
Private	Otto Gebhardt	D	11	15	26	Sept. 3	C. M. C.	
Captain	G. Henry Witthaus	Staff	12	14	26	June 8		10
Private	S. G. Burke	F	12	14	26	Aug. 2		1
Lieutenant	G. A. Clement	Staff	13	13	26	Sept. 4		
Corporal	D. Callanan	F	13	13	26	June 8		1
Private	S. Niederwiessen	I	13	13	26	Aug. 2		
Private	F. Chase	K	14	12	26	July 18		1
Private	C. H. Goetzinger	B	14	12	26	June 8		1
Private	James McAllister	E	14	12	26	Oct. 3		
Private	Thomas Wood	I	14	12	26	Sept. 4		
Corporal	T. Garner	K	15	11	26	June 8		1
Private	William Krefeldt	D	15	11	26	June 8		
Private	P. F. McCarney	G	15	11	26	June 8		2
Private	P. Finanazzo	G	16	10	26	Aug. 2		
Private	L. Pagnetti	I	16	10	26	Aug. 2		1
First Lieut.	J. D. Walton	D	17	9	26	June 8		4
Sergeant	F. J. Higgins (Q. M. S.)	N.C.S	17	9	26	July 18		3
Corporal	John Murray	I	19	7	26	Nov. 6	C. M. C.	2
Private	H. H. Speirs	H	19	7	26	Aug. 2		
Private	T. E. Wilcocks	G	19	7	26	June 8		3
Private	N. B. Willink	A	19	7	26	Sept. 4		
Corporal	W. F. Holderman	I	10	15	25	Sept. 4		1
Private	W. J. Paxton	F	11	14	25	Aug. 2		
Private	F. C. Sarrington	A	11	14	25	Aug. 2		
Private	Aug. Ebeling	H	12	13	25	Sept. 4		1
Private	H. Lahm	C	13	12	25	June 8		
Captain	N. L. Cocheu	B	14	11	25	Sept. 4		4
Corporal	Charles Schmeiser	B	15	10	25	June 8		7
Private	H. Biedenbender	D	15	10	25	Sept. 4		
Private	F. Huber, Jr.	G	15	10	25	Nov. 6	C. M. C.	
Captain	W. W. Marks	F	16	9	25	Aug. 2		2
First Sergt.	C. M. Gilbert	D	16	9	25	Aug. 18	C. M. C.	4
Private	W. H. Herbold	B	16	9	25	Sept. 4		3
Sergeant	H. J. Stolpe	B	17	8	25	Aug. 2		
Corporal	A. Vachus	C	17	8	25	June 8		2

NINTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	James Bishop	I	17	8	25	June 8		1
Private	John Guizettie	D	17	8	25	June 8		4
Lieut.-Col.	T. B. Rand	Field	18	7	25	May 21		6
Private	W. H. Truman	H	18	7	25	June 8		1
Private	F. Powers	I	20	5	25	Nov. 6	C. M. C.	

Total..... 143

ELEVENTH REGIMENT.

(Figure of merit 22.56.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Captain.....	J. W. Hale (I. R. P.) *.....	Staff	23	21	44	Sept. 11	C. M. C.	12
Lieutenant...	C. L. Levien	I	20	21	41	Sept. 3	C. M. C.	3
Captain.....	C. F. Surbrug	I	17	23	40	Aug. 14		3
Second Lieut.	W. F. H. Tupper	D	21	14	35	Oct. 20		
First Sergt...	Paul Dickhuth	K	15	17	32	Aug. 14		2
First Lieut...	W. L. Miller	D	18	14	32	July 14	C. M. C.	2
Second Lieut.	Louis Gumbart	F	17	14	31	Aug. 14		1
First Sergt...	M. Kramer	C	9	21	30	Sept. 3	C. M. C.	2
First Lieut...	J. M. Ranken	G	14	16	30	Aug. 14		4
Second Lieut.	P. P. May	B	15	15	30	Aug. 14		
Second Lieut.	G. G. Junker	C	10	18	28	Aug. 14		1
Q. M. Sergt...	E. Hermes	C	11	17	28	Aug. 14		1
Private	G. E. Horn	A	11	17	28	Aug. 14		
Private	E. Engelskuch	K	13	15	28	Aug. 14		
Sergeant	E. Von Zeugen (S. B.)	N.C.S	16	12	28	Aug. 14		
Private	H. Greenberg	I	16	12	28	Aug. 14		
Sergeant	C. Gress	A	19	9	28	Aug. 14		2
Corporal.....	Jno. Stuart	A	15	12	27	Nov. 6	C. M. C.	1
Corporal.....	Otto Berger	F	17	10	27	Aug. 14		1
Private	M. Bernstein	F	11	15	26	Aug. 14		
Captain.....	G. W. Collins (Asst. Surg.)	Staff	14	12	26	Aug. 14		2
First Lieut...	L. L. Coudert	G	14	12	26	Aug. 14		
Sergeant	C. A. Finn	B	14	12	26	Aug. 14		
Captain.....	G. W. Mooney	B	18	8	26	Aug. 14		1
Private	B. Simon	B	9	16	25	Aug. 14		
First Lieut...	Fred. Yung (Q. M.)	Staff	12	13	25	Aug. 14		1
Private	Jac. Ammon	B	12	13	25	Aug. 14		
Captain.....	T. F. Schmidt	C	15	10	25	Aug. 14		5
Lieutenant...	C. Muecke	B	15	10	25	Aug. 14		2
Corporal.....	J. A. Frank	F	18	7	25	Aug. 14		1
First Sergt...	G. F. Fleischmann	F	19	6	25	Aug. 14		1

Total..... 31

TWELFTH REGIMENT.

(Figure of merit 40.67.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Sergeant	T. J. Dolan (O. S.) *	N.C.S	25	25	50	Sept. 11	C. M. C.	13
Sergeant	A. B. Van Heusen *	B	23	24	47	Sept. 14	N. Y. S. M. ...	13
First Lieut.	E. C. Smith *	A	21	25	46	Aug. 18	C. M. C.	6
Captain	C. L. Lindley (Asst. Surg.)*	Staff	23	23	46	Sept. 11	C. M. C.	2
Private	Sam. Monroe *	B	20	25	45	Sept. 11	C. M. C. ....	...
Captain	W. Content*	H	22	23	45	July 26	...	6
Captain	Jno. Macauley (I. R. P.)*	Staff	23	22	45	Aug. 18	C. M. C.	8
Private	E. Lockley *	E	21	23	44	Sept. 11	C. M. C.	3
Colonel	J. H. Jones *	Field	19	24	43	May 11	...	9
First Lieut.	A. E. Schuman *	G	20	23	43	Aug. 25	C. M. C.	2
Sergt. Major.	Aug. Kingsland *	N.C.S	20	23	43	Sept. 14	1st Brig. M. ...	3
First Sergt.	W. L. Frost*	C	20	23	43	July 21	C. M. C.	3
Sergeant	J. H. Cockburn *	A	19	23	42	Sept. 11	C. M. C.	3
Corporal	M. C. Stewart	G	19	21	40	Aug. 25	C. M. C.	1
Major	N. H. Henry (Surg.)	Staff	20	19	39	Aug. 25	C. M. C.	5
Private	C. J. Leach	B	19	19	38	June 15	...	8
Private	C. Filschue	B	21	17	38	June 26	...	...
Sergeant	C. N. Bajar (S. B.)	N.C.S	15	22	37	July 4	C. M. C.	6
Captain	C. S. Burns	B	16	21	37	June 15	...	11
Sergeant	C. J. Dentinger	F	16	21	37	June 15	...	3
Private	G. Donovan	K	20	17	37	Aug. 15	...	...
Captain	H. C. Aspinwall	I	14	22	36	July 4	C. M. C.	10
Sergeant	B. Reilly	E	14	22	36	June 15	...	4
Corporal	F. W. Brown	K	17	19	36	Nov. 6	C. M. C.	1
Private	D. H. Melville, Jr.	B	20	16	36	June 15	...	1
Private	C. B. Jackson	C	17	18	35	May 3	...	...
Captain	W. H. Murphy	F	18	17	35	June 15	...	13
Sergeant	Hugh Lawson	B	18	17	35	June 15	...	4
Private	J. B. Simpson	C	19	16	35	Oct. 20	...	1
First Sergt.	R. C. Kammerer	K	20	15	35	Aug. 15	...	8
Private	F. Lopez	I	15	19	34	Sept. 6	...	2
Private	W. H. Hendrickson	D	16	18	34	Sept. 6	...	1
Corporal	M. Malone	E	13	20	33	July 4	C. M. C.	4
Captain	B. S. Barnard	D	16	17	33	July 18	...	7
Lieutenant.	C. M. Jessup	Staff.	16	17	33	June 26	...	3
Corporal	E. J. King	A	15	17	32	June 25	...	2
Private	H. H. Helde	D	15	17	32	Sept. 6	...	...
Private	George Banks	A	16	16	32	Aug. 15	...	...
Corporal	George Frothingham	H	21	11	32	June 26	...	1
Private	Jac Warshauer	A	13	18	31	June 26	...	1
Corporal	E. U. Rice	D	15	16	31	Sept. 6	...	3
Private	Jas. Drake	C	15	16	31	Sept. 6	...	1
Sergeant	S. Y. Coudock	A	17	14	31	June 15	...	1
First Lieut.	F. F. Carey	I	18	13	31	Sept. 6	...	3
First Lieut.	Samuel Parsons	H	18	13	31	Sept. 6	...	7
Sergeant	John McDermott	E	18	13	31	June 15	...	4
Private	J. M. Bostwick	G	20	11	31	May 11	...	...
Private	J. F. White	K	12	18	30	Sept. 6	...	2
Second Lieut.	J. Sternberger	A	14	16	30	June 26	...	3
Private	H. Brown	H	15	15	30	June 20	...	1
Private	J. L. Aiken	K	16	14	30	Sept. 6	...	1
Private	S. M. Raymond	F	16	14	30	June 15	...	...
First Sergt.	G. D. Gaillard	F	18	12	30	June 26	...	11
First Sergt.	C. J. Seiter	D	18	12	30	July 18	...	2
Corporal	Samuel Frank	K	12	17	29	Nov. 6	C. M. C.	1
Corporal	William Farragh	F	13	16	29	June 15	...	1
Private	J. O'Donnell	F	13	16	29	June 15	...	2
Sergeant	A. L. Huyler (H. S.)	N.C.S	14	15	29	June 15	...	2
Corporal	H. Stadtmuller	A	14	15	29	June 26	...	1
First Sergt.	Thos. Kelly	H	15	14	29	Sept. 6	...	11
Sergeant	L. Jackson	D	15	14	29	July 18	...	3
Private	R. Boyd	B	15	14	29	June 15	...	1
Private	J. Villedon	E	15	14	29	July 4	C. M. C. ....	...
Sergeant	A. Mitchell	H	16	13	29	Sept. 6	...	3
Corporal	A. J. Weinck	A	16	13	29	Aug. 15	...	1
Private	D. A. Killeen	F	17	12	29	June 15	...	2
Private	G. V. Miller	G	17	12	29	Sept. 6	...	...

TWELFTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	E. M. Pearsall	D	17	12	29	Sept. 6		..
Captain	Frank Roosevelt	E	12	16	28	June 15		2
Major	J. J. Riker	Field	14	14	28	June 15		6
Sergeant	J. C. Prentice	F	15	13	28	June 26		3
Private	W. A. Keegan	C	15	13	28	June 15		..
First Sergt	G. B. Katen	E	16	12	28	June 15		..
Sergeant	Wm. Kummer	A	16	12	28	June 26		1
Private	G. M. Fetzer	D	16	12	28	July 18		3
Second Lieut.	J. L. Ewing	F	17	11	28	Nov. 6	C. M. C	3
Q. M. Sergt	E. L. Usbeck	K	17	11	28	Aug. 15		6
Captain	J. F. Boylan	K	19	9	28	Sept. 6		2
First Lieut.	E. R. Powers (Q. M.)	Staff	10	17	27	June 26		2
Sergeant	C. T. Montague (L. G. G.)	N.C.S	11	16	27	June 15		2
Corporal	D. R. Ireland	C	11	16	27	June 15		3
Private	Samuel Barranger	C	12	15	27	June 15		1
Private	J. M. Mayorga	D	12	15	27	June 15		1
Private	John McCormick	H	13	14	27	Sept. 6		..
Private	W. P. Puls	B	14	13	27	June 26		1
Private	J. C. King	F	14	13	27	Aug. 15		..
Private	A. J. Griffin	K	14	13	27	Sept. 6		..
Private	James Frazer	G	14	13	27	July 4	C. M. C	10
Corporal	J. W. Berry, Jr.	K	15	12	27	Aug. 15		1
Private	W. D. B. Wood	F	15	12	27	June 15		..
Private	R. E. Heslin	C	16	11	27	June 15		..
Private	Thos. McCaffrey	H	16	11	27	Sept. 6		1
Private	E. F. Mooney	E	16	11	27	Sept. 6		..
First Lieut.	H. G. Paine	E	17	10	27	June 15		1
First Sergt	Wm. Warren	A	17	10	27	June 26		4
Sergeant	C. W. Harris	D	17	10	27	June 26		3
Private	H. Bishoff	G	17	10	27	June 26		..
Private	C. T. Jewell	C	17	10	27	June 15		1
Private	G. E. Palmer	B	17	10	27	July 4	C. M. C	..
Private	R. H. Coleman	H	18	9	27	June 26		5
Private	M. Brown	K	11	15	26	Aug. 15		1
Captain	J. M. Brady	Staff	12	14	26	June 26		3
Sergeant	J. D. Muller (S. B.)	N.C.S	12	14	26	June 15		3
Sergeant	James Winstock	E	12	14	26	June 15		3
Sergeant	T. C. Patterson	C	13	13	26	June 26		2
Sergeant	Henry Kessler	H	13	13	26	June 26		1
Private	E. C. Tellstrand	G	13	13	26	June 26		..
Second Lieut.	W. F. Catterfield	I	14	12	26	Sept. 6		4
Private	A. Erikson	F	14	12	26	Sept. 6		..
Sergeant	Thos. Gernsen	H	15	11	26	Sept. 6		..
Q. M. Sergt	George Bersheim	C	15	11	26	Nov. 6	C. M. C	2
Corporal	H. E. Hoehn	I	15	11	26	Sept. 6		2
Captain	W. H. Kirby	G	16	10	26	June 15		12
Sergeant	John Hoag	F	16	10	26	July 14	C. M. C	4
Sergeant	J. J. Wennenberg	F	16	10	26	June 15		2
Private	Thomas Watt	D	16	10	26	July 18		1
Captain	R. Delafield	C	17	9	26	Sept. 6		3
Private	Wm. McDermott	A	17	9	26	June 26		1
Private	Wm. Laver	F	18	8	26	July 4	C. M. C	..
Sergeant	J. M. Campbell	K	19	7	26	Sept. 6		2
Sergeant	J. H. Nozizlia	B	10	15	25	June 15		2
Corporal	E. J. Gleason	B	10	15	25	June 26		1
Private	W. S. Perceval	I	12	13	25	Sept. 6		..
Private	F. Zinn	B	12	13	25	June 15		..
Private	J. A. Jenkins	H	13	12	25	June 26		1
Private	W. H. Traphagen	D	13	12	25	Sept. 6		1
Private	S. B. Peterson	B	13	12	25	June 15		1
Q. M. Sergt	G. W. Homan	N.C.S	15	10	25	Sept. 6		3
Private	G. H. Allen	G	15	10	25	June 26		..
Private	F. E. Walkley	B	15	10	25	June 15		..
Lt. Colonel	Heman Dowd	Field	16	9	25	June 26		3
Private	J. S. Cobb	G	16	9	25	Sept. 6		..
Private	E. T. Starr	D	16	9	25	Sept. 6		3
Private	D. C. Sherwood	B	16	9	25	Sept. 16		1
Corporal	B. Reilly	F	17	8	25	June 15		..
Private	M. O'Brien	E	17	8	25	Sept. 6		2

TWELFTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	C. L. Hyde	D	17	8	25	July 18	.....	1
Private	W. S. Fay	B	18	7	25	June 15	.....	1
Captain	H. Pell	A	19	6	25	June 26	.....	2
Private	Jas. Mazza	A	21	4	25	June 26	.....	2

Total140.

TWENTY-SECOND REGIMENT.

(Figure of merit44.88.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Second Lieut.	W. N. Bavier*	B	22	23	45	Sept. 11	C. M. C.	11
Q. M. Sergt...	O. W. Vate*	F	22	23	45	Sept. 11	C. M. C.	1
Captain	N. B. Thurston*	E	21	23	44	Sept. 3	C. M. C.	11
Corporal	S. J. Murphy*	B	21	23	44	Oct. 27	C. M. C.	2
Private	R. Byars*	G	19	24	43	Aug. 25	C. M. C. ....	.....
Sergeant	W. E. Burnton*	F	20	23	43	Sept. 3	C. M. C.	12
Private	A. T. Weston*	E	22	21	43	Sept. 3	C. M. C.	1
First Sergt...	H. H. Treadwell*	B	19	23	42	Oct. 13	C. M. C.	9
Private	A. Z. Bowen*	G	19	23	42	Aug. 11	C. M. C. ....	.....
Sergeant	J. C. Kane	E	20	22	42	Sept. 3	C. M. C.	3
Sergeant	W. L. Bostleman (S. B.)	N.C.S.	20	21	41	Sept. 11	C. M. C.	11
Sergeant	J. A. Turney	F	20	21	41	Oct. 13	C. M. C.	6
First Lieut...	H. A. Benecke	K	16	24	40	Sept. 7	.....	5
Captain	J. W. Finch (I. R. P.)	Staff	19	21	40	May 9	.....	3
First Lieut...	J. P. Kenworthy	A	19	20	39	Sept. 3	C. M. C.	12
Sergeant	C. D. Merchant	I	19	20	39	July 4	C. M. C.	2
Private	R. R. Dana	B	18	20	38	Aug. 18	C. M. C.	1
Captain	C. A. DuBois	F	15	22	37	Sept. 7	.....	2
Corporal	B. F. Tuers	F	18	18	36	July 4	C. M. C.	2
Sergeant	C. F. Kross (L. G. G.)	N.C.S.	19	17	36	Sept. 7	.....	4
Sergeant	H. S. Kiernan	B	20	16	36	Sept. 7	.....	4
Captain	W. E. Preece	A	14	21	35	Sept. 7	.....	3
First Sergt...	G. T. Nichol	F	16	19	35	Sept. 7	.....	3
Private	H. H. Decker	G	16	19	35	Oct. 3	.....	.....
Corporal	A. Halliday	E	17	18	35	July 16	.....	.....
Private	T. W. Dick	B	17	18	35	Nov. 6	C. M. C. ....	.....
Private	W. H. Hanley	B	17	18	35	Sept. 6	.....	5
Captain	J. P. Leo	I	19	16	35	Sept. 29	C. M. C.	10
Private	F. Kloeckner	E	19	16	35	Sept. 29	C. M. C. ....	.....
Private	Paul Weill	D	19	16	35	Oct. 13	C. M. C.	1
Q. M. Sergt...	E. N. Bunsman	B	20	15	35	Sept. 7	.....	.....
Private	A. VonAuw	G	20	15	35	Sept. 7	.....	2
Corporal	M. MacGregor	F	17	17	34	Sept. 7	.....	3
Private	L. L. Grotta	H	18	16	34	Oct. 3	.....	.....
Private	A. B. Hudson	F	19	15	34	Sept. 7	.....	2
First Sergt...	J. A. Bell	D	21	13	34	Sept. 7	.....	7
Private	W. F. Beaver	B	16	17	33	Oct. 13	C. M. C.	1
Private	F. S. Lawrence	C	17	16	33	Sept. 7	.....	1
Private	H. Dessar	K	18	15	33	Nov. 6	C. M. C. ....	.....
Private	G. E. Wells	B	19	14	33	Aug. 18	C. M. C.	1
Corporal	G. A. Koehler	F	14	18	32	Sept. 7	.....	1
Private	F. A. Kramer	A	14	18	32	Nov. 6	C. M. C. ....	.....
Captain	J. P. Jardine	Staff	15	17	32	Sept. 7	.....	4
Second Lieut.	R. J. Daly	K	15	17	32	Sept. 7	.....	5
Sergeant	W. R. George	H	15	17	32	Sept. 7	.....	2
Private	T. DeW. Scoble	B	15	17	32	Sept. 7	.....	3

TWENTY-SECOND REGIMENT—(Continued).

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
First Lieut.	C. M. Skellen	H	16	16	32	Sept. 7		4
Private	R. G. Howe	E	17	15	32	Sept. 7		
Private	W. H. Pierrez	F	17	15	32	Oct. 3		3
Private	H. Wilcox	E	18	14	32	Sept. 19		
Second Lieut.	M. C. Murray	C	10	21	31	Nov. 6	C. M. C.	3
Private	George Schaefer	G	12	19	31	Oct. 3		
Private	W. H. Wallace	I	12	19	31	Nov. 6	C. M. C.	
Private	J. J. Mahoney	A	13	18	31	Sept. 7		3
Private	E. Rudolph	E	13	18	31	Oct. 27	C. M. C.	4
Corporal	A. Fox	H	14	17	31	Oct. 20		3
Private	W. F. Follett	F	16	15	31	Sept. 7		
Sergt. Major.	S. F. Hart	N.C.S	17	14	31	Sept. 7		4
Sergeant	D. Lowenbein	F	17	14	31	Sept. 7		3
Private	L. F. Buck	G	18	13	31	July 4	C. M. C.	2
Private	J. W. MacDermott	C	13	17	30	Oct. 3		1
Sergeant	W. E. Haws, Jr. (Q. M. S.)	N.C.S	25	15	30	Sept. 7		6
Sergeant	L. A. Harrison, Jr.	C	15	15	30	Sept. 7		
Private	M. J. Conroy	A	15	15	30	Sept. 7		1
Corporal	D. S. Brown, Jr.	B	16	14	30	Oct. 3		
Private	H. R. Ostrom	F	16	14	30	July 18		
Private	W. H. Townsend	G	16	14	30	Sept. 19		1
Major	G. A. Miller	Field	17	13	30	Sept. 29	C. M. C.	10
Sergeant	H. Ayers	E	17	13	30	Sept. 7		2
First Lieut.	W. S. Bennett	F	18	12	30	Sept. 3	C. M. C.	4
Private	A. A. White	A	18	12	30	Sept. 7		
Private	F. Hendricks	B	19	11	30	Sept. 12		1
Corporal	B. S. Hart	K	12	17	29	Sept. 7		2
Private	R. L. Asten	E	14	15	29	Sept. 7		1
Private	La D. M. Knowles	F	15	14	29	Oct. 3		2
First Lieut.	C. H. Rockwell	I	16	13	29	May 9		3
Second Lieut.	W. J. Huzzey	F	16	13	29	Sept. 7		1
Second Lieut.	A. E. Dick	H	17	12	29	Sept. 29	C. M. C.	6
Corporal	L. Hanneman	B	17	12	29	Sept. 7		
Corporal	L. Richter	B	17	12	29	Sept. 7		
Corporal	R. S. Van Demark	I	18	11	29	Sept. 7		
Private	Chas. Weindell	D	19	10	29	Sept. 7		
Corporal	T. W. Cook	E	12	16	28	July 16		2
Private	G. H. Matthews	B	13	15	28	Sept. 7		1
First Lieut.	J. A. Quigley	E	14	14	28	Sept. 7		2
Private	J. H. Mulligan	A	14	14	28	Sept. 7		
Private	P. Unger	B	14	14	28	Nov. 6	C. M. C.	
Corporal	E. W. Cummings	A	16	12	28	Sept. 7		
Captain	W. V. King	B	17	11	28	Sept. 7		4
Second Lieut.	W. D. Haws	E	17	11	28	Oct. 10		4
Private	J. E. Briggs	H	17	11	28	Sept. 7		1
Private	F. P. Fliin	E	18	10	28	Oct. 3		
Private	S. M. Winteringham	B	18	10	28	Aug. 25	C. M. C.	
Private	C. W. Morse	C	20	8	28	Sept. 19		
Private	E. N. Wetzler	B	20	8	28	Oct. 13	C. M. C.	
Private	J. A. O'Connor	H	11	16	27	Sept. 19		
Private	G. M. Buttle	H	12	15	27	Sept. 7		
Corporal	Giles Rea	G	15	12	27	Sept. 3	C. M. C.	
Private	N. Brickelmeier	E	15	12	27	Sept. 7		
Private	D. M. Davidson	C	15	12	27	Sept. 7		
Private	E. T. Ward	B	15	12	27	Nov. 6	C. M. C.	
Captain	J. G. R. Lilliendahl	C	17	10	27	Sept. 7		4
First Lieut.	Jas. O'Neil	D	17	10	27	Sept. 7		6
Private	A. E. Davis	I	18	9	27	Sept. 7		
Sergeant	Geo. Woods	D	10	16	26	Sept. 7		
Private	J. W. Nagle	H	11	15	26	Sept. 7		
Private	R. H. Secor	D	11	15	26	Sept. 7		
Private	M. J. Spellman	G	11	15	26	Sept. 7		
Private	A. Blauvelt	K	12	14	26	Sept. 7		
Private	E. J. Chapman	G	12	14	26	Sept. 7		
Private	Geo. Richardson	D	12	14	26	Sept. 7		
Private	B. Richards	K	12	14	26	Sept. 7		
Private	S. R. Peck	A	13	13	26	Sept. 7		
Sergeant	J. B. Cavagnaro	A	14	12	26	Sept. 7		2
Corporal	J. Unger	B	14	12	26	Sept. 7		1
Private	H. Rose	B	14	12	26	Nov. 6	C. M. C.	

TWENTY-SECOND REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	C. L. Gale	F	16	10	26	Sept. 7		
Private	H. Lemke	B	16	10	26	Nov. 6	C. M. C.	
Private	F. Richter	H	16	10	26	Sept. 7		
First Sergt. ...	E. O. Berthoff	C	17	9	26	Oct. 3		1
Corporal	W. B. Heward	A	17	9	26	Sept. 7		2
Private	W. J. Bateman	B	18	8	26	Nov. 6	C. M. C.	
Private	J. C. Gilbert	B	18	8	26	Sept. 7		1
Sergeant	W. R. Prescott (S. B.)	N.C.S	19	7	26	Sept. 7		5
Private	W. F. Bailey	H	20	6	26	Oct. 3		
Private	W. M. Briggs	H	20	6	26	Sept. 7		1
Sergeant	W. F. Gorham	C	21	5	26	Sept. 8		1
Private	J. A. Ritchie	B	10	15	25	Nov. 6	C. M. C.	1
Sergeant	M. M. Miles	E	12	13	25	Sept. 7		2
Corporal	S. A. Lent	E	12	13	25	Sept. 7		
Private	D. Wolff	B	12	13	25	Nov. 6	C. M. C.	
Private	J. H. Wightman	B	13	12	25	Sept. 7		1
First Lieut. ...	E. W. Dayton	G	14	11	25	July 4	C. M. C.	1
Second Lieut. ...	S. F. Ball	G	17	8	25	Sept. 3	C. M. C.	1
Private	J. Kiechlin, Jr.	A	17	8	25	July 18		1
Private	J. A. Swinerton	B	17	8	25	Nov. 6	C. M. C.	
Q. M. Sergt. ...	Jno. Buckingham	A	18	7	25	Nov. 6	C. M. C.	1
Corporal	E. Griffen	B	18	7	25	Nov. 6	C. M. C.	1
Private	H. H. Tweedy	G	18	7	25	Sept. 7		
Corporal	J. S. Blake	K	19	6	25	Sept. 7		1
Private	E. Emanuel	A	19	6	25	Sept. 7		1
Private	A. M. Lomley	I	19	6	25	Sept. 7		4

Total 142

SIXTY-NINTH REGIMENT.

(Figure of merit..... 27.30.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Q. M. Sergt. ...	Frank Stuart *	C	23	25	48	Aug. 4	C. M. C.	8
Major	Edw. Duffy *	Field	21	21	42	Sept. 29	C. M. C.	13
Captain	K. Kerr *	K	21	21	42	June 25		12
Private	J. M. Commerford *	C	21	21	42	Sept. 26		2
Private	P. Finnegan *	C	21	21	42	July 4	C. M. C.	4
Lieut.-Col. ...	Jas. Moran	Field	22	15	37	Sept. 26		12
Private	W. Daly	B	19	17	36	Sept. 3	C. M. C.	1
Captain	M. Brennan	A	20	16	36	Nov. 6	C. M. C.	7
Second Lieut. ...	L. C. Quinn	I	21	15	36	June 25		4
Private	W. Carroll	B	17	18	35	Aug. 15		
Sergeant	J. N. Levins (L. G. G.)	N.C.S	19	16	35	Sept. 3	C. M. C.	4
Corporal	P. Clark	D	19	16	35	Sept. 19		
Second Lieut. ...	P. Farrelly	D	18	16	34	Sept. 26		9
Sergeant	R. F. Martell	K	18	16	34	Sept. 26		3
Corporal	Jos. Duffy	G	18	16	34	June 18		
Private	Wm. Doyle	H	18	16	34	Sept. 26		1
Private	J. O. G. Murphy	C	18	16	34	Sept. 27		1
Second Lieut. ...	F. J. Magee	G	14	19	33	June 18		6
Private	J. Lawler	K	16	17	33	Aug. 15		
First Sergt. ...	T. F. Kerr	K	17	16	33	June 25		4
Private	J. J. Magner	C	17	16	33	June 25		1
Second Lieut. ...	J. J. Scanlon	F	22	11	33	Sept. 26		3
Sergeant	P. Flaherty	E	12	20	32	June 18		
Private	E. Moore	C	13	19	32	June 18		

SIXTY-NINTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	F. McGinnis	G	16	16	32	Nov. 6	C. M. C.	
Corporal	M. Milmo	K	16	16	32	Sept. 27		1
Private	W. J. Donnelly	C	17	15	32	Sept. 26		1
Private	A. J. Jones	A	19	13	32	Sept. 26		1
Second Lieut.	W. McLoughlin	H	20	12	32	Sept. 27		2
Sergeant	P. M. Drew	B	15	16	31	June 18		1
Corporal	Henry Monaghan	B	15	16	31	June 18		1
Private	Jno. Caffrey	F	15	16	31	Sept. 27		
Private	D. Malone	I	15	16	31	Sept. 27		
Private	D. M. Seaton	C	16	15	31	June 25		
Private	Thos. Fitzpatrick	D	17	14	31	Sept. 27		
Private	D. Garvey	B	19	12	31	Sept. 27		
Private	J. J. Griffen	A	20	11	31	Nov. 6	C. M. C.	2
Private	T. Bannon	G	13	17	30	June 18		1
Corporal	Peter Grealey	A	14	16	30	Nov. 6	C. M. C.	2
Private	H. Morrissey	K	17	13	30	Sept. 27		1
Private	J. J. Dunnigan	C	18	12	30	June 18		
Private	M. Slattery	C	18	12	30	June 25		1
Private	T. M. Crimmins	B	20	10	30	Sept. 26		
Captain	P. J. Morgan	H	21	9	30	Sept. 26		5
Private	S. Duggan	A	14	15	29	June 18		
Private	J. Lynch	A	14	15	29	Nov. 6	C. M. C.	
Corporal	T. Flynn	C	16	14	29	June 25		1
Corporal	Jas. Cassidy	B	16	13	29	June 18		
First Lieut.	P. F. Leonard	B	20	9	29	June 18		5
Private	M. H. Carr	G	13	15	28	June 18		
Private	E. Barry	A	14	14	28	Sept. 26		1
Private	J. J. Mullahey	C	15	13	28	June 18		1
Captain	Hugh Coleman	E	16	12	28	June 18		7
Q. M. Sergt.	M. T. Ralph	K	16	12	28	Sept. 27		3
Sergeant	Jno. Gleason	I	17	11	28	June 25		4
Captain	Thomas Morton	F	12	15	27	Sept. 27		2
Private	C. Hanley	C	14	13	27	Sept. 27		1
Private	J. Gilroy	H	15	12	27	June 25		
Private	M. Murray	H	15	12	27	Sept. 26		
Private	O. Clark	H	16	11	27	Sept. 26		
Private	Jno. Kane	F	16	11	27	Sept. 26		1
Private	J. Kerr, Jr.	K	16	11	27	Sept. 26		1
Private	Peter Carroll	F	17	10	27	June 25		3
First Lieut.	Wm. Hogan	G	17	10	27	Sept. 26		7
Private	T. Heath	K	17	10	27	June 25		
Private	M. McGuire	D	17	10	27	Sept. 26		
Private	F. J. Plumley	C	18	9	27	June 18		
Private	J. Healey, No. 2	C	19	8	27	June 25		
Private	J. Behan	B	22	5	27	Sept. 27		
Private	Thomas Martin	A	9	17	26	Sept. 27		
Private	R. J. Nash	D	10	16	26	Sept. 26		
Private	E. Cashin	C	11	15	26	June 18		1
Captain	J. J. Ryan (I. R. P.)	Staff.	12	14	26	June 18		
Private	P. Bannon	F	13	13	26	Sept. 27		
Sergeant	Jno. D. O'Connell	H	14	12	26	June 25		2
Private	B. F. Brady	I	14	12	26	June 25		
Private	M. Byrnes	H	14	12	26	Sept. 26		
Private	W. F. Phillips	C	14	12	26	June 25		1
Captain	D. C. McCarty	C	15	11	26	June 25		9
Sergeant	P. Hayes	G	15	11	26	June 18		2
Private	W. E. Flynn	C	15	11	26	Sept. 26		1
Q. M. Sergt.	J. Bergen	E	16	10	26	Sept. 26		1
Private	J. J. Glynn	C	16	10	26	June 25		1
First Lieut.	J. Murphy (Adjt.)	Staff.	17	9	26	June 18		3
Private	M. Donohue	F	17	9	26	June 25		1
Private	J. Fitzpatrick	E	17	9	26	June 18		
Private	T. C. O'Mahoney	K	17	9	26	Sept. 27		
Private	J. Sott	C	17	9	26	June 18		1
Private	P. Flood	C	18	8	26	Sept. 26		
Private	J. Murphy	H	19	7	26	Sept. 26		
Private	Jno. Gowan	H	6	19	25	June 25		
Sergeant	T. J. Coleman	A	9	16	25	Sept. 27		2
Sergeant	R. Hayes	C	11	14	25	June 18		1
First Sergt.	R. Brown	E	12	13	25	June 18		1

SIXTY-NINTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Sergeant	Geo. O. Hanlon	K	12	13	25	Sept. 26	.....	1
Private	J. J. Van Riper	C	12	13	25	June 25	.....	3
Private	Jas. Kearns	F	13	12	25	Sept. 26	.....	2
Private	C. Plumley	C	13	12	25	June 18	.....	1
Corporal	Chas. Mahon	F	14	11	25	June 25	.....	1
Private	M. D. Collisen	K	14	11	25	Sept. 27	.....	1
Private	M. P. Grealey	A	14	11	25	June 18	.....	1
Private	Thos. Parker	G	14	11	25	June 18	.....	1
Sergeant	J. E. Sharkey (H. S.)	N.C.S	15	10	25	June 18	.....	1
Private	F. Byrnes	I	15	10	25	June 25	.....	.....
Private	W. Cahill	I	15	10	25	Sept. 27	.....	.....
Private	D. Sweeney	H	15	10	25	Sept. 27	.....	.....
Corporal	D. McCarty	K	16	9	25	Sept. 27	.....	1
Sergeant	W. McGee	N.C.S	18	7	25	Sept. 26	.....	1
Private	J. Flaherty	C	18	7	25	June 25	.....	1
Sergeant	D. O'Byrne (O. S.)	N.C.S	19	6	25	June 18	.....	3

Total 110

SEVENTY-FIRST REGIMENT.

(Figure of merit 36.59.)

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
First Lieut.	O. H. Smith*	B	18	24	42	Oct. 27	C. M. C.	1
Corporal	A. H. Paul*	B	19	23	42	Oct. 13	C. M. C.	1
Captain	C. H. Hoyt (I. R. P.)*	Staff.	20	22	42	June 14	.....	6
Corporal	H. J. McCartin	I	19	22	41	Oct. 10	.....	2
Colonel	Fredk. Kopper	Field	16	24	40	Oct. 10	.....	7
First Sergt.	A. J. McGregor	I	18	19	37	June 14	.....	2
Private	W. S. Beekman	B	18	19	37	Oct. 27	C. M. C.	1
Corporal	W. J. Stockman	K	22	15	37	Sept. 19	.....	1
Major	E. T. T. Marsh (Surg.)	Staff.	19	17	36	June 14	.....	3
Private	W. H. Carter	H	19	17	36	June 14	.....	.....
Private	J. L. Crawford	F	14	21	35	June 14	.....	.....
Private	F. E. Stair	C	14	21	35	Nov. 6	C. M. C. ....	.....
Captain	W. D. Goss	K	20	15	35	June 14	.....	4
Corporal	L. W. Francis	C	13	21	34	June 14	.....	2
Private	P. G. Schumacher	B	13	21	34	Sept. 29	C. M. C. ....	.....
Captain	A. P. Delcambre	H	17	17	34	June 14	.....	6
Sergeant	R. Stokes	A	19	15	34	June 14	.....	3
Major	W. A. Downs	Field	15	18	33	Aug. 23	.....	1
Private	F. D. L. Walker	B	17	16	33	Nov. 6	C. M. C. ....	.....
Second Lieut.	J. N. Golding	C	19	14	33	June 14	.....	3
Corporal	A. C. Seibeneichen	H	13	19	32	June 14	.....	4
Corporal	S. E. Moore	K	18	14	32	Aug. 23	.....	.....
Private	W. A. McGalliard	H	21	11	32	May 2	.....	1
Private	J. F. Fickenger	K	13	18	31	June 14	.....	2
Sergeant	T. E. Shackleton (S. B.)	N.C.S	14	17	31	June 14	.....	1
Corporal	Jno. Miller, Jr.	K	14	17	31	June 14	.....	3
Second Lieut.	C. B. Stone	D	15	16	31	Aug. 23	.....	2
Private	E. B. Bogert	B	15	16	31	Oct. 2	.....	1
Captain	C. M. Kennedy	A	16	15	31	June 14	.....	2
Second Lieut.	W. T. Gonch	A	17	14	31	Aug. 23	.....	2
Q. M. Sergt.	E. P. Woodman	B	18	13	31	Nov. 6	C. M. C. ....	.....
Sergeant	H. M. Kirk	I	11	19	30	Oct. 10	.....	1
Sergeant	F. R. Cavanagh	B	13	17	30	Oct. 27	C. M. C.	2

SEVENTY-FIRST REGIMENT — (*Concluded.*)

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Corporal.....	E. C. Pickard	A	13	17	30	Oct. 10		1
Private	T. Reilly	A	13	17	30	Nov. 6	C. M. C.	
Lieutenant...	F. Keck	C	14	16	30	Sept. 3	C. M. C.	5
Q. M. Sergt.	W. S. Gleason.....	H	15	15	30	June 14		9
Private	J. T. Leahy	K	15	15	30	Nov. 6	C. M. C.	
Private	H. C. Stahl	B	15	15	30	June 14		1
Sergeant	A. M. Alexander (R. G. G.)	N.C.S	17	13	30	June 14		
Private	Edward Sampson.....	B	17	13	30	Oct. 10		
Private	J. Addicott.....	C	18	12	30	June 14		
Private	G. R. Stair	C	9	20	29	Aug. 11	C. M. C.	
Corporal.....	C. S. Reton.....	B	15	14	29	Oct. 2		1
First Lieut.	M. D. Guiry.....	F	19	10	29	Oct. 10		6
Second Lieut.	T. W. Timpson	B	19	10	29	June 14		
Private	J. J. Gardiner.....	C	19	10	29	June 4		
Private	J. F. Coogan.....	A	20	9	29	Aug. 25	C. M. C.	2
First Sergt.	S. P. Fisher	H	12	16	28	May 10	C. M. C.	
First Sergt.	P. H. Halley.....	D	12	16	28	Aug. 23		4
First Sergt.	W. H. Orson	B	12	16	28	Oct. 13	C. M. C.	1
Corporal.....	B. Pick	A	12	16	28	June 14		1
Corporal.....	W. D. Bryant	K	13	15	28	June 14		
Private	W. S. Young	B	13	15	28	June 14		1
Q. M. Sergt.	G. D. Hobart.....	K	15	13	28	June 14		2
Captain	W. C. Clark	D	17	11	28	Aug. 23		11
First Lieut.	P. S. Tilden (Adj't).	Staff	17	11	28	Aug. 23		
Private	F. W. Brandes.....	B	18	10	28	Nov. 6	C. M. C.	
Corporal.....	G. B. McWhinney.....	F	19	9	28	June 14		2
Private	E. E. Austin.....	B	8	19	27	Oct. 13	C. M. C.	
First Sergt.	W. L. Royall	C	11	16	27	June 14		5
Private	D. McDiarmid.....	C	11	16	27	June 14		
Private	F. D. Dessoit.....	A	12	15	27	Oct. 10		
Private	George Gornee.....	F	12	15	27	June 14		1
Second Lieut.	E. R. Bangs	G	13	14	27	June 14		
Corporal.....	E. H. Frost.....	A	13	14	27	Nov. 6	C. M. C.	
Private	M. J. Pierson.....	A	14	13	27	Oct. 10		
Private	E. D. Smith	B	14	13	27	Sept. 19		
Private	G. F. Ruggles.....	G	15	12	27	June 14		
Corporal.....	R. A. Barry.....	I	18	9	27	Oct. 10		3
Private	H. L. Banks.....	B	19	8	27	Oct. 2		
Private	J. T. Yates	H	11	15	26	Oct. 10		1
Corporal.....	T. H. Copeland.....	C	13	13	26	June 14		1
Private	F. D. Holbrook.....	B	14	12	26	Oct. 27	C. M. C.	
Private	W. L. Taylor.....	H	15	11	26	June 14		
Private	W. S. Way.....	H	15	11	26	Oct. 10		
Corporal.....	A. J. Roberts.....	H	16	10	26	Aug. 23		2
Corporal.....	P. Rodriguez.....	F	16	10	26	June 14		
Private	D. S. Carter	H	16	10	26	June 14		
Private	L. J. Kaiser	C	16	10	26	Oct. 10		1
Corporal.....	M. R. Beringer.....	G	17	9	26	June 14		2
Corporal.....	H. J. Matzke.....	D	17	9	26	Aug. 23		1
Private	J. J. Regan.....	C	17	9	26	June 14		
Captain	W. R. Pryor (Asst. Surg.)	Staff.	19	7	26	Aug. 23		1
Sergeant.....	J. H. Kottman.....	G	7	18	25	June 14		1
Private	C. H. Hodges.....	C	10	15	25	Nov. 6	C. M. C.	
Private	Wm. Longson, Jr.....	H	12	13	25	June 14		
Private	J. J. Baum.....	K	13	12	25	Aug. 23		
Private	E. J. Dunn.....	A	13	12	25	Oct. 10		1
Sergeant.....	J. H. Petrie (S. B.).....	N.C.S	14	11	25	Aug. 23		
Sergeant.....	N. Bruford	C	14	11	25	June 14		
Private	J. J. Adgate.....	D	14	11	25	June 14		2
Private	John Carter.....	H	14	11	25	June 14		
Private	F. Pidgeon.....	D	14	11	25	Aug. 23		
Private	J. O. Nelson.....	A	15	10	25	Oct. 10		1
Private	A. H. Hanft.....	C	16	9	25	June 14		

Total..... 96

SECOND BRIGADE.

(Figure of merit..... 50.05.)

GENERAL AND STAFF.

(Figure of merit..... 90.00.)

Rank.	NAME.	SCORE.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Major.....	G. L. Fox *	22	22	44	Sept. 29	C. M. C.....	10
Lieut.-Col.....	J. B. Frothingham *	21	22	43	Oct. 13	C. M. C.....	13
Major.....	Fritz Brosé	19	21	40	June 11	.....	3
Major.....	W. C. Sanger	16	17	33	Aug. 11	C. M. C.....	2
Captain.....	Edward Annan, Jr	18	14	32	June 20	.....	.....
Brig.-Gen.....	James McLeer	18	13	31	June 11	.....	12
Captain.....	F. T. Leigh	16	14	30	June 11	.....	4
Captain.....	F. B. Beard	19	10	29	June 11	.....	1
Major.....	Geo. Kinkel, Jr	14	12	26	June 20	.....	2

Total.....

THIRTEENTH REGIMENT.

(Figure of merit..... 48.20.)

Rank.	NAME.	Company.	SCORE.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
			200 yards.	500 yards.	Total.			
Private.....	T. G. Austin *	G	21	25	46	Sept. 3	C. M. C.....	8
Private.....	G. W. Lotz *	G	25	21	46	Aug. 25	C. M. C.....	3
Sergeant.....	G. E. Constable *	F	22	23	45	Aug. 18	C. M. C.....	7
Sergeant.....	G. A. Lane *	A	22	23	45	Sept. 11	C. M. C.....	6
Private.....	J. J. Trevan *	F	20	24	44	Sept. 3	C. M. C.....	6
Q. M. Sergt.....	H. G. Morris *	G	21	23	44	Sept. 3	C. M. C.....	5
Corporal.....	S. F. Fahnestock *	I	19	24	43	Sept. 3	C. M. C.....	3
Sergeant.....	James McNeven (O. S.) *	N.C.S	20	23	43	Sept. 29	C. M. C.....	11
Private.....	W. L. Easson *	G	18	24	42	Sept. 14	C. M. C.....	1
Captain.....	T. H. Babcock (I. R. P.)..	Staff	20	20	40	Oct. 13	C. M. C.....	5
Private.....	Jno. Watson	F	17	22	39	Sept. 11	C. M. C.....	1
Private.....	H. W. Griffith	K	18	21	39	Oct. 27	C. M. C.....	.....
Private.....	W. E. Cody	E	22	16	38	Aug. 30	.....	2
Private.....	W. F. Kemble	G	16	21	37	June 21	.....	.....
Second Lieut.....	G. C. Broome	I	17	20	37	Sept. 29	C. M. C.....	1
Private.....	C. E. Bonnett	G	18	19	37	Oct. 27	C. M. C.....	.....
Second Lieut.....	F. R. Wiswell	A	19	18	37	June 21	.....	1
Private.....	W. S. Hempstead	E	19	18	37	Oct. 8	.....	.....
Private.....	R. P. Lane	A	19	18	37	July 4	C. M. C.....	.....
First Lieut.....	W. A. Brown	E	20	17	37	June 21	.....	12
Private.....	A. A. Hayward	G	14	22	36	June 21	.....	5
Captain.....	W. H. Cochran	H	18	18	36	June 21	.....	4
Private.....	J. J. F. Doyle	I	19	17	36	Aug. 30	.....	.....
Private.....	C. J. Moore	B	19	17	36	Sept. 3	C. M. C.....	1
Sergeant.....	J. F. Cooper	D	20	16	36	Oct. 8	.....	6
Private.....	L. Gan, Jr.	I	20	16	36	Aug. 30	.....	2
Private.....	R. E. Miller	G	13	22	35	Nov. 6	C. M. C.....	.....
Private.....	W. L. Slandorff	H	14	21	35	June 21	.....	.....
Private.....	C. H. Northridge	E	15	20	35	Nov. 6	C. M. C.....	2
Sergeant.....	Hayward Smith (C. S.)..	N.C.S	16	19	35	June 12	.....	4
Private.....	E. A. Whitman	H	16	19	35	June 21	.....	2
Private.....	Jno. Hillyard	K	17	18	35	Aug. 30	.....	.....
Sergeant.....	J. J. Baxter	G	18	17	35	June 21	.....	9

THIRTEENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	W. P. Clickner	G	18	17	35	July 14	C. M. C.	1
Sergeant	W. P. Rae	G	20	15	35	Oct. 8		5
Corporal	F. P. DeVigne	D	20	15	35	June 21		3
Private	H. W. Forsbrey	C	13	21	34	Aug. 30		1
First Lieut.	R. H. Sillman	F	15	19	34	June 12		9
Corporal	G. W. Cowen	F	16	18	34	July 4	C. M. C.	
Lieut.-Col.	W. J. Harding	F. & S.	17	17	34	Aug. 30		6
First Lieut.	J. F. O'Connor	A	17	17	34	June 21		3
Sergeant	C. A. Faas, Jr.	D	19	15	34	June 21		5
Captain	W. J. Collins	A	20	14	34	June 21		13
Private	Wm. Johnston	I	12	21	33	Aug. 30		1
Private	L. W. Farrington	K	15	18	33	June 12		
Corporal	Alex. Parker	F	16	17	33	June 12		6
Private	J. F. Crane	E	16	17	33	Oct. 8		
Private	J. E. Emmerson	G	16	17	33	June 21		2
Private	F. M. Lawrence	K	16	17	33	July 4	C. M. C.	
Private	W. Walton	E	16	17	33	Nov. 6	C. M. C.	
Captain	J. A. Cochran (Asst. Surg.)	Staff	17	16	33	Sept. 29	C. M. C.	
Private	B. F. Lane	G	17	16	33	June 21		
Private	F. M. Neal	K	17	16	33	June 12		
First Sergt.	A. H. Linn	F	19	14	33	June 12		4
Private	T. M. Wells	G	19	14	33	June 21		
Private	G. W. R. Easson	G	20	13	33	Oct. 27	C. M. C.	1
Captain	J. F. Dillont	F	15	17	32	June 12		5
Second Lieut.	F. G. Peoble	D	16	16	32	Nov. 6	C. M. C.	1
Corporal	V. Werner	H	16	16	32	June 21		2
Captain	Wm. Kerby	E	17	15	32	June 21		4
Captain	G. G. Cochran	I	17	15	32	Aug. 30		2
Private	E. F. Beal	C	17	15	32	June 12		1
Private	H. E. Gold	I	17	15	32	Aug. 30		
Private	T. M. Harvey	G	17	15	32	Aug. 30		12
Private	D. F. Hill	G	17	15	32	June 21		2
Private	A. A. Holske	H	18	14	32	June 21		4
Private	F. P. Margnand	C	18	14	32	May 12		2
Private	C. R. Mathews	E	18	14	32	June 12		1
Sergeant	P. M. Calligan	C	19	13	32	Oct. 8		2
Private	G. W. Holt	D	19	13	32	June 21		1
Private	J. S. Doyle	B	13	18	31	June 12		2
Captain	W. L. Watson	G	14	17	31	Sept. 29	C. M. C.	9
Private	C. H. Higgins	B	14	17	31	June 12		6
Private	W. H. Beals	G	15	16	31	Nov. 6	C. M. C.	
Private	W. A. Bow, Jr.	I	15	16	31	June 21		
Private	M. B. Flynt	H	15	16	31	June 21		5
Private	J. H. Little	I	15	16	31	Nov. 6	C. M. C.	3
First Sergt.	M. J. Calligan	C	16	15	31	Sept. 3	C. M. C.	2
Major	R. P. Morle	Field	17	14	31	June 12		11
Private	F. W. Biggs	G	17	14	31	June 21		
Private	M. Dunn	G	17	14	31	June 21		
Private	J. F. Gordon	E	17	14	31	June 21		1
Corporal	F. F. Prinkard, Jr.	A	18	13	31	Aug. 30		1
Private	M. J. McKenna	C	18	13	31	June 12		1
Private	C. W. Smith	G	10	20	30	June 21		1
Private	C. A. Evans	F	11	19	30	Sept. 19	C. M. C.	
Private	W. F. Holmes	A	11	19	30	Aug. 13		1
Private	D. Smith	K	14	16	30	June 12		
Q. M. Sergt.	Charles Werner	N. C. S.	15	15	30	June 12		4
Corporal	J. E. Parsons	G	16	14	30	June 21		2
Private	M. A. Doherty	H	16	14	30	Oct. 13	C. M. C.	1
Private	L. Du Flon	F	16	14	30	May 8		4
Private	F. C. Wickes	B	19	14	30	June 12		2
Q. M. Sergt.	G. A. Wilson	H	17	13	30	June 21		2
Corporal	E. W. Bryan	I	17	13	30	Nov. 6	C. M. C.	1
Private	A. Snellgrove	F	17	13	30	June 12		1
Private	W. H. Wilson	F	17	13	30	Aug. 30		4
Sergeant	G. R. Hazard	G	18	12	30	Nov. 6	C. M. C.	4
Private	J. J. Demonet	H	18	12	30	June 21		1
Private	C. P. Jung	B	18	12	30	June 12		2
Corporal	J. T. Ashley	H	13	16	29	Aug. 30		2
First Lieut.	R. Benedict (Adj.)	Staff	14	15	29	June 21		6
Captain	C. O. Davis	D	15	14	29	Aug. 30		5

THIRTEENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Q. M. Sergt...	S. Grant	D	15	14	29	Nov. 6	C. M. C.....	1
Colonel	D. E. Austin	Field	16	13	29	June 21		7
Private	W. Beard, Jr.	K	16	13	29	May 12		
Private	A. Rugaara	G	16	13	29	June 21		
Private	T. W. Bunting	A	17	12	29	Sept. 3	C. M. C.....	
Private	C. O. Fransecky	A	17	12	29	June 21		1
Private	A. A. Gallaway	A	17	12	29	June 21		
Private	J. K. Johnson	H	17	12	29	June 21		
Private	E. C. Cowlishaw	F	18	11	29	June 12		2
Private	H. Meekes	D	18	11	29	Aug. 30		2
Private	T. Simmons, Jr.	E	18	11	29	June 21		8
Private	P. D. Clifton	F	19	10	29	June 21		
Corporal	S. A. Johnson	A	20	9	29	June 12		1
Private	W. Yerks	E	20	9	29	June 21		2
Private	A. H. Durbars	C	11	17	28	Sept. 3	C. M. C.....	2
Private	O. Koch	D	11	17	28	Aug. 15		1
Private	M. A. Dotten	G	12	16	28	Nov. 6	C. M. C.....	2
Sergeant	H. E. Browne	A	13	15	28	Aug. 30		4
Corporal	G. W. Clackner	D	13	15	28	Aug. 30		2
Private	A. P. Chichester	A	13	15	28	June 21		2
Private	T. A. Stohlmann	B	13	15	28	Aug. 30		
Corporal	M. Remington	H	14	14	28	Aug. 30		1
Private	J. H. Doyle	F	14	14	28	June 12		1
Private	E. J. Jones	F	14	14	28	Nov. 6	C. M. C.....	
Private	J. C. Lass	E	14	14	28	June 21		
Private	J. D. Kinsey	G	15	13	28	June 21		
Private	E. J. McIverny	G	15	13	28	Nov. 6	C. M. C.....	2
Private	Wm. Cottrell	D	16	12	28	Aug. 30		2
Private	S. E. Isaacson	E	17	11	28	June 21		4
Private	J. H. Cushman	I	18	10	28	Aug. 30		2
Lieutenant	C. W. Rogers	K	19	9	28	Aug. 30		1
Private	W. H. Nash, Jr.	G	19	9	28	Oct. 13	C. M. C.....	
Private	J. A. Eden, Jr.	G	10	17	27	June 21		
Private	G. Keller	D	12	15	27	Oct. 8		1
Private	W. D. Leesler	I	12	15	27	Nov. 6	C. M. C.....	1
Private	G. M. Field	K	14	13	27	Nov. 6	C. M. C.....	
Private	E. H. Kirby	E	14	13	27	June 12		
Private	E. A. Pratt	K	14	13	27	Oct. 8		
Private	R. F. Woehi	H	14	13	27	June 21		2
Private	Wm. Flatten	K	15	12	27	Oct. 8		3
Private	C. A. Hornby	H	15	12	27	June 21		2
Private	W. G. Davies	G	16	11	27	Aug. 30		
Captain	A. R. Jarrett	Staff	17	10	27	Nov. 6	C. M. C.....	1
First Lieut	J. A. Anderson	C	18	9	27	Aug. 30		
Corporal	F. A. Morris	B	18	9	27	Oct. 13	C. M. C.....	
Private	E. H. Bennett	H	18	9	27	June 21		2
Private	A. J. Easson	G	18	9	27	Aug. 30		1
Private	W. J. Knowles	I	18	9	27	June 12		
Captain	C. H. Luscomb	K	18	9	27	Oct. 8	C. M. C.....	4
Private	W. H. Mason	G	18	9	27	June 21		
Private	B. N. McQueen	G	18	9	27	June 21		2
Private	J. M. McQueen	G	18	9	27	June 21		2
Private	A. L. Fletcher, Jr.	A	19	8	27	June 21		2
Sergeant	T. L. Westcott	H	21	6	27	June 21		3
Sergeant	George Sandhusen (C. B.).	N.C.S	8	18	26	June 21		2
Second Lieut	L. E. Brown	E	9	17	26	June 21		1
Sergeant	T. W. Buddlemann	F	11	15	26	June 12		4
Private	C. A. Williams	B	11	15	26	June 12		1
Q. M. Sergt...	J. F. Doscher	E	13	13	26	June 21		1
Corporal	P. R. Welch	E	13	13	26	June 21		1
Private	J. F. Abrams	E	13	13	26	Nov. 6	C. M. C.....	2
Private	W. E. Collins	G	13	13	26	June 21		1
Private	R. A. Riker	K	13	13	26	Aug. 30		8
Private	H. J. Schmalix	G	13	13	26	Aug. 30		
First Lieut	W. H. Coughlin	K	14	12	26	June 12		2
Sergeant	W. H. Lux	K	14	12	26	Aug. 30		4
Private	H. T. Allen	K	14	12	26	June 12		
Private	William Diesel	D	14	12	26	Aug. 30		1
Private	B. H. Hall	K	14	12	26	June 21		
Private	Thomas Rowlands	K	14	12	26	Nov. 6	C. M. C.....	

THIRTEENTH REGIMENT — (*Concluded*).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			250 yards.	500 yards.	Total.			
Private	C. H. Clifford	K	15	11	26	Aug. 30		
Private	A. C. Englehard	K	15	11	26	Aug. 30		
First Sergt. .	F. W. Nash	E	15	11	26	June 12		
Private	G. R. Pearson	E	15	11	26	June 21		
Private	J. Woehe	F	15	11	26	Oct. 13	C. M. C.	4
Q. M. Sergt. .	P. S. Gendar	B	16	10	26	June 12		3
Corporal	H. Leigh	E	16	10	26	June 21		2
Private	R. Bishop	C	16	10	26	June 12		2
Private	F. D. Conditt	K	16	10	26	July 4	C. M. C.	
Private	C. H. Strong	I	16	10	26	Aug. 30		2
Captain	C. P. Fish	C	17	9	26	June 12		6
Corporal	G. W. Strong	K	17	9	26	June 21		
Private	G. E. Holmes	A	17	9	26	June 21		1
Sergeant	F. W. Boden	I	18	8	26	June 12		2
Private	James Brophy	C	18	8	26	June 12		
Corporal	O. F. Lorenberg	G	19	7	26	Aug. 30		1
Private	C. H. Wiswell	A	19	7	26	June 21		1
Private	George Pettit	F	20	6	26	Aug. 30		2
Sergeant	J. H. Yanch	H	9	16	25	Aug. 30		4
Private	W. Donaghy, Jr.	H	9	16	25	July 18		1
Sergeant	W. S. Gendar	B	10	15	25	June 12		3
Private	G. B. Allen	K	10	15	25	July 4	C. M. C.	
Private	A. R. L. Chilton	C	11	14	25	Aug. 30		
Private	H. H. Frary	D	11	14	25	June 21		1
Private	R. Black	D	12	13	25	Aug. 30		2
Private	F. Chadwick	E	12	13	25	Nov. 6	C. M. C.	1
Private	H. D. Dumont	K	12	13	25	Aug. 30		
Private	J. S. Stockton	G	12	13	25	Oct. 27	C. M. C.	
Private	J. McKinney	K	13	12	25	June 21		
Sergeant	M. M. Kelly	I	14	11	25	Aug. 30		1
Private	J. N. Heim	G	14	11	25	Oct. 8		
Private	W. J. Johnson	C	14	11	25	Aug. 30		
Private	J. W. Stewart	A	14	11	25	Nov. 6	C. M. C.	
Private	A. A. Waters	C	14	11	25	June 21		1
Sergeant	E. H. Norwood (C. B.)	N.C.S.	15	10	25	June 21		3
Private	L. S. Cole	H	15	10	25	Nov. 6	C. M. C.	4
Private	J. S. Jennings	B	15	10	25	Oct. 8		
Private	C. A. Fisch	E	15	10	25	Oct. 8		2
Corporal	D. S. Green	C	16	9	25	June 12		1
Private	W. E. Blauvelt	F	16	9	25	June 12		1
Private	R. F. Byrne	F	16	9	25	June 12		
Private	A. L. Pettit	K	16	9	25	June 12		
Private	H. W. Styles	A	16	9	25	Oct. 8		2
Private	G. H. Farrington	K	17	8	25	July 4	C. M. C.	
Private	W. A. French	D	17	8	25	Aug. 30		
Private	H. Rosselle	B	18	7	25	May 10		1
Private	F. Brotherhood	H	19	6	25	June 21		

Total..... 220

FOURTEENTH REGIMENT.

(Figure of merit. 36.14.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Second Lieut.	E. A. Anderson*	I	23	22	45	Sept. 11	C. M. C.	7
Q. M. Sergt.	J. F. Foote*	B	20	23	43	Oct. 13	C. M. C.	2
First Lieut.	C. C. Wallace*	I	22	21	43	July 21	C. M. C.	3
Private	G. Buehler	A	17	23	40	Aug. 7		4
Private	Geo. Breining	I	20	19	39	Aug. 7		3
Captain	J. R. K. Barlow	E	17	21	38	Nov. 6	C. M. C.	11
Captain	H. Nutt	D	18	20	38	Oct. 3		13
Private	J. H. Lacroix	I	18	20	38	Aug. 7		4
Captain	J. J. Dixon	A	19	19	38	Aug. 7		11
Second Lieut.	W. C. Noble	A	19	19	38	Aug. 7		10
Captain	J. M. White	B	21	17	38	Aug. 7		12
Private	R. T. Mitchell	B	17	19	36	May 11		4
Private	W. E. Taylor	I	20	16	36	July 18		7
Private	B. Thrall	I	21	15	36	Aug. 7		2
Corporal	L. J. Cardona	I	17	18	35	Aug. 7		4
Private	M. Wikstrom	G	13	20	33	Aug. 7		1
Sergeant	A. J. Main	F	13	19	32	July 18		4
Private	J. G. Graham	D	13	19	32	Sept. 21		
Corporal	T. Kilfoil	A	14	18	32	Aug. 7		3
Sergeant	F. H. Stevenson	A	15	17	32	Aug. 7		3
Private	Jos. Seymour	A	15	17	32	Sept. 21		
Second Lieut.	C. W. Bridges	K	17	15	33	Sept. 3	C. M. C.	4
First Sergt.	J. P. McNamara	C	21	11	32	Nov. 6	C. M. C.	5
Private	A. F. Trabant	A	15	16	31	Sept. 21		3
Sergeant	G. W. Vernon	C	16	15	31	July 18		3
Private	V. Bark	G	16	15	31	Oct. 26		
Private	J. L. Breining	I	16	15	31	Aug. 7		3
Private	J. K. Martin	K	16	15	31	Sept. 21		
Private	M. Olsen	B	18	13	31	Aug. 7		
Private	F. E. Bockleman	I	20	11	31	May 12		2
Second Lieut.	H. J. McDermott	B	13	17	30	Aug. 7		1
Private	Chas. Butterworth	A	13	17	30	Aug. 7		
Private	J. C. Cole	I	14	16	30	Oct. 20		5
Captain	John Cutts	H	16	14	30	Oct. 26		10
Private	L. Green	H	16	14	30	Aug. 7		3
Private	B. K. Porter	I	16	14	30	Oct. 26		2
Private	E. W. Hacker	F	18	12	30	Oct. 26		
Colonel	H. W. Michell	Field	19	11	30	Aug. 7		9
Private	J. J. Baldwin	D	19	11	30	Sept. 21		1
Private	G. A. Keating	B	21	9	30	Sept. 21		4
First Lieut.	A. L. Kline	D	14	15	29	Oct. 3		5
Corporal	P. G. Farrell	I	15	14	29	May 9		4
Private	J. J. Bismar	H	15	14	29	Aug. 7		2
Private	C. F. Thomas	A	18	11	29	Aug. 7		3
Corporal	C. A. Osterberg	G	19	10	29	Aug. 7		2
Private	E. A. Branton	I	20	9	29	Aug. 7		1
Sergeant	O. Schrig (R. G. G.)	N.C.S	10	18	28	Oct. 26		10
Private	J. C. Griffin	C	12	16	28	Aug. 7		1
Private	James Henry	C	12	16	28	July 18		1
Private	J. L. McCue	K	12	16	28	Sept. 21		1
Captain	W. F. Morris	K	13	15	28	Aug. 7		10
Private	G. W. Leonard	E	13	15	28	Aug. 7		
Private	R. W. Moore	C	14	14	28	Oct. 26		
Sergeant	Edw. Tugman	D	15	13	28	Aug. 7		1
Private	R. W. Borsman	A	15	13	28	Sept. 21		
Private	W. Hoylen	C	15	13	28	Oct. 26		
Sergeant	C. F. Anderson	G	16	12	28	Aug. 7		2
Sergeant	James Fogerty	D	16	12	28	Sept. 21		1
Corporal	J. H. Lennon	D	18	10	28	Aug. 7		1
Private	O. Lundquist	G	18	10	28	Sept. 21		3
Private	T. B. Chambers	E	14	13	27	Sept. 21		3
First Lieut.	P. E. Ericson	G	15	12	27	Aug. 7		2
Private	H. H. Barnes	B	15	12	27	Oct. 26		
Private	Thomas Gorr	K	15	12	27	Sept. 21		1
Major	John McNeill	Field	17	10	27	Aug. 7		4
First Lieut.	G. H. Rice	A	17	10	27	Aug. 7		3
Q. M. Sergt.	Charles Ahlen	A	17	10	27	Aug. 7		3
Q. M. Sergt.	G. R. Jennings	E	17	10	27	Sept. 21		2

FOURTEENTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Sergeant	M. J. Mullen	K	18	9	27	Oct. 26		1
Corporal	W. J. Driscoll	B	18	9	27	Aug. 7		
Captain	A. O. Crane	I	19	8	27	Sept. 21		9
Sergeant	J. A. Donnelly	E	11	15	26	Oct. 26		
Corporal	C. A. Holenberg	G	11	15	26	Aug. 7		3
Corporal	George Morris	D	11	15	26	Aug. 7		
Captain	R. Cardona (I. R. P.)	Staff	12	14	26	Aug. 7		11
Second Lieut.	E. W. Castell	D	12	14	26	Oct. 26		2
Sergeant	John Crawford (C. B.)	N.C.S	12	14	26	Sept. 21		5
Private	F. S. Packard	I	12	14	26	Aug. 7		
Corporal	W. S. Riefenstahl	F	13	13	26	Sept. 21		2
Private	R. Legge	B	13	13	26	Sept. 21		
Private	A. Moore	H	15	11	26	Aug. 7		8
Private	George Rydberg	G	15	11	26	Oct. 26		
Major	J. F. Atwood (Surg.)	Staff	16	10	26	Sept. 21		1
Sergeant	G. W. Granger	I	16	10	26	Aug. 7		3
Private	E. E. Wells	K	16	10	26	Sept. 21		
Private	J. F. Boyce	A	17	9	26	Aug. 7		1
Private	A. C. Carlberg	G	17	9	26	Aug. 7		1
Private	J. L. Mackintosh	I	17	9	26	Oct. 26		
Private	G. S. Turley	C	17	9	26	Aug. 7		
Private	J. Clifford	A	18	8	26	Sept. 21		
Private	W. R. Painter	I	20	6	26	Aug. 7		
Second Lieut.	N. B. McBride	F	9	16	25	Sept. 21		1
Private	E. J. Canner	B	10	15	25	Oct. 26		1
Corporal	J. J. Bergen	K	12	13	25	Oct. 3		1
Private	A. H. Henze	I	12	13	25	Nov. 6	C. M. C.	
Private	A. Schaefer	B	12	13	25	Oct. 26		
Sergeant	J. C. Hartt	A	13	12	25	Oct. 26		1
Private	D. Beatty	A	13	12	25	Oct. 26		
Private	S. W. Haff	K	13	12	25	Oct. 26		2
Corporal	F. Prendergast	A	13	12	25	Oct. 26		2
Private	F. Groth	A	15	10	25	Aug. 7		3
Private	G. Lloyd	C	15	10	25	Nov. 6	C. M. C.	
Private	L. J. Tetamore	I	15	10	25	Oct. 26		6
Corporal	D. Hange	G	15	10	25	Sept. 21		1
Private	J. Blomberg	G	16	9	25	Aug. 7		6
Q. M. Sergt.	G. S. Capstick	C	16	9	25	Aug. 7		1
Private	F. J. Mackey	B	18	7	25	Aug. 7		1
Sergeant	A. H. Reed	F	19	6	25	July 18		
Captain	F. L. Tetamore (As't Surg)	Staff	20	5	25	Aug. 7		9

Total..... 109

TWENTY-THIRD REGIMENT.

(Figure of merit..... 69.84)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualification
			200 yards.	500 yards.	Total.			
Private	G. S. Scott, Jr*	A	23	25	48	Aug. 25	M. B.	3
Captain	Ezra De Forest*	C	23	25	47	Sept. 13	A. C.	13
Sergeant	F. A. Wells*	B	22	25	47	Oct. 13	M. B.	10
First Lieut.	J. S. Shepherd*	D	23	24	47	Sept. 10	A. C.	9
Second Lieut.	G. F. Hamlin*	I	21	25	46	June 9	M. B.	4
Captain	F. L. Holmes*	I	22	24	46	Sept. 29	M. B.	7
First Lieut.	W. P. Pickett*	B	22	24	46	Sept. 14	N. Y. State.	7
Sergeant	H. De W. Hamilton*	I	22	24	46	Sept. 14	N. Y. State.	4

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	Geo. Ball *	F	22	24	46	Sept. 14	2d Brigade..	3
First Sergt ...	W. A. Stokes *	I A	22	24	46	Sept. 12	A. C.	4
Private	C. W. Simmons *	Staff	23	23	46	Nov. 6	M. B.	2
First Lt. & Co.	Richard Oliver *		20	25	45	July 28	M. B.	4
Corporal	W. G. Kimball *	A	21	24	45	Nov. 6	M. B.	4
Captain	A. C. Saunders *	H	21	24	45	Sept. 3	M. B.	11
Private	E. F. M. Wendelstadt *	B	21	24	45	July 4	M. B.	1
Corporal	W. A. Bayer *	C	23	22	45	Sept. 3	M. B.	5
Private	Jos. M. Carrere *	A	20	24	44	Sept. 15	A. C.	4
First Lieut ...	J. T. Hall *	F	20	24	44	Aug. 4	M. B.	3
Capt. & I. R. P.	H. C. Brown *	Staff	21	23	44	Sept. 12	A. C.	11
Private	J. M. Brooks *		21	23	44	Nov. 6	M. B.	2
Corporal	E. V. Howard *	I	21	23	44	Nov. 6	M. B.	3
Private	L. J. Elliot *	C	22	22	44	Sept. 13	A. C.	9
Orderly Sergt.	C. E. Bryant *	N.C.S	22	22	44	Sept. 29	M. B.	13
Sergeant Maj.	H. D. Beekun *	N.C.S	22	22	44	Nov. 6	M. B.	8
Private	H. M. Field *	F	19	24	43	Aug. 11	M. B.	1
Private	S. C. Pirie *	I	20	22	43	Aug. 25	M. B.	3
Private	W. J. Savoy *	F	21	22	43	Aug. 25	M. B.	1
Corporal	F. I. Perry *	I	21	22	43	July 21	M. B.	4
First Sergt ...	H. P. Fowler *	F	20	22	42	Aug. 11	M. B.	7
Private	C. H. S. Jaffrey *	I	20	22	42	Nov. 6	M. B.	3
Corporal	F. T. Cooke *	B	20	22	42	July 14	M. B.	3
Captain	W. L. Candee *	I	20	22	42	July 28	M. B.	13
Private	I. E. Winslow *	C	20	22	42	July 21	M. B.	3
Private	R. Findlay *	G	21	21	42	Aug. 25	M. B.	3
Sergeant	W. A. Robinson *	A	21	21	42	July 28	M. B.	7
Sergeant	G. T. Musson *	K	22	20	42	July 21	M. B.	12
Corporal	C. E. Graff *	B	22	20	42	July 14	M. B.	5
First Lieut ...	G. A. Williams *	H	22	20	42	June 9	M. B.	7
Corporal	G. Reed	I	19	22	41	Aug. 18	M. B.	1
Private	W. S. Hueston	H	19	22	41	Oct. 13	M. B.	2
Corporal	W. C. Hough	A	18	22	40	July 21	M. B.	4
Private	C. L. H. Brueninghausen.	B	18	22	40	July 4	M. B.	1
Private	G. W. Slade	B	19	21	40	Aug. 4	M. B. ....	...
Corporal	P. H. Worth	A	16	23	39	June 11	...	4
Corporal	C. L. Coleman	B	17	22	39	Nov. 6	M. B.	3
Private	R. N. Hunter	E	17	22	39	July 26	...	2
Second Lieut.	E. J. Kraft	D	18	21	39	May 18	...	8
Private	W. A. Green	A	18	21	39	July 21	M. B.	3
Private	F. Estabrook	H	19	20	39	May 17	...	3
Private	W. G. Hull	F	20	19	39	Nov. 6	M. B.	2
Private	P. H. Edwards	E	21	18	39	Nov. 6	M. B.	2
Corporal	W. B. T. Ronalds	K	22	17	39	July 31	M. B.	2
Private	J. A. MacKinnon, Jr.	K	17	21	38	June 11	...	1
Sergeant	H. Graff	B	18	20	38	Sept. 3	M. B.	5
Private	W. E. Colton	A	18	20	38	May 17	...	2
Private	J. M. Weir	I	18	20	38	Nov. 6	M. B. ....	...
Corporal	J. F. Stier	I	19	19	38	Nov. 6	M. B.	3
Private	A. Borland	K	19	19	38	Nov. 6	M. B. ....	...
Private	C. R. Braine	F	19	19	38	Aug. 11	M. B.	3
Corporal	C. E. Crook	G	20	18	38	July 26	...	2
Corporal	H. Greenman	F	20	18	38	May 10	...	3
Private	O. A. Renne	G	21	17	38	July 26	...	1
Private	W. D. C. Field	A	22	16	38	July 26	...	3
Sergeant	G. A. Turnbull	D	17	20	37	June 11	...	6
Private	N. King	G	17	20	37	June 11	...	4
Private	R. B. Mather	A	17	20	37	June 9	M. B.	3
Private	W. L. Moorehouse	I	17	20	37	July 14	M. B.	2
Private	C. B. Upjohn	I	17	20	37	Oct. 20	...	2
Private	J. J. Fussell	F	18	19	37	Aug. 4	M. B. ....	...
Private	G. H. A. Toler	A	18	19	37	May 17	...	3
Corporal	H. Mc Taylor	F	20	17	37	Aug. 25	M. B.	4
Private	J. R. Barton	A	20	17	37	Aug. 4	M. B.	4
Private	H. Van Winkle	F	20	17	37	Aug. 25	M. B.	3
Corporal	H. B. Shute	I	16	20	36	May 17	...	3
Private	M. Antosanti	K	16	20	36	July 26	...	1
Private	E. Hiler	C	16	20	36	Oct. 4	...	1
Private	H. L. Thompson	I	16	20	36	Nov. 6	M. B. ....	...
Corporal	R. E. Whitney	D	17	19	36	May 18	...	3

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	W. Oldenburg	C	17	19	36	Oct. 27	M. B.	5
Private	P. S. Swain	A	17	19	36	May 17		1
Private	F. W. Walker	F	18	18	36	May 18		
Sergeant	F. C. Dennington	H	19	17	36	Aug. 25	M. B.	2
Private	A. B. Graves	A	19	17	36	May 17		1
Private	G. B. Bretz	A	20	16	36	Aug. 25	M. B.	3
Sergeant	R. H. Hurles	H	14	21	35	June 9	M. B.	4
Private	T. H. Barnard	F	15	20	35	May 18		3
Sergeant	G. I. Johnson	F	16	19	35	Oct. 4		1
Private	B. G. Saunders	H	16	19	35	Nov. 6	M. B.	
Corporal	J. R. Clarke	C	17	18	35	Sept. 19		1
Private	J. H. Evans	A	17	18	35	May 17		4
Maj. & Surg.	W. E. Spencer	Staff.	18	17	35	May 17		9
Col. Sergeant.	F. B. Van Doorn	N.C.S.	18	17	35	May 17		10
Sergeant	A. F. Cary	G	18	17	35	Aug. 18	M. B.	
Private	C. Haas	A	18	17	35	May 17		1
Private	R. H. Kimber	D	18	17	35	June 11		3
Private	H. W. Burford	B	19	16	35	July 26		1
Private	R. B. Dawson	I	19	16	35	May 17		1
Private	T. W. Kavanaugh	C	19	16	35	Oct. 20		4
Private	R. W. King	F	12	22	34	May 18		2
Private	C. C. Cluff	I	14	20	34	Oct. 13	M. B.	
Private	J. S. Meserole	A	15	19	34	Sept. 29	M. B.	3
Private	J. M. Tiebout	F	15	19	34	July 26		
Private	G. J. Hardy	B	16	18	34	June 11		
Private	F. T. Jervis	I	16	18	34	Aug. 15		3
Corporal	A. Leavens	F	17	17	34	May 18		3
Private	T. W. Arnold	C	17	17	34	June 11		3
Private	C. D. Bartholomew	A	18	16	34	Sept. 3	M. B.	1
Private	C. C. Berge	F	18	16	34	May 18		1
Private	C. T. Christensen	I	18	16	34	Nov. 6	M. B.	2
Private	J. M. Ellis	I	18	16	34	May 17		1
Private	J. Middleton	I	18	16	34	Nov. 6	M. B.	
Private	J. N. R. Bryant	H	19	15	34	June 11		3
Private	W. J. MacVeety	K	19	15	34	Nov. 6		1
Private	L. C. Schliep	I	19	15	34	July 26		
Private	F. E. Steele	I	19	15	34	May 17		2
Private	J. J. Norris	C	20	14	34	July 14	M. B.	8
Private	W. E. Douglas	I	13	20	33	July 26		3
Private	H. E. Barre	I	14	19	33	Aug. 4		3
Private	H. D. Schoonmaker	F	14	19	33	June 11		1
Private	R. Kelland	H	15	18	33	July 26		
Private	E. B. Strout	C	15	18	33	June 11		2
Private	C. W. Andrus	H	16	17	33	June 9	M. B.	1
Private	H. M. Gates	D	16	17	33	Oct. 13	M. B.	1
Corporal	J. L. Brumley, Jr.	B	17	16	33	Oct. 13	M. B.	1
Private	W. J. Burkhard	C	17	16	33	July 14	M. B.	2
Private	C. D. Newman	A	17	16	33	Oct. 4		3
Private	W. Braisted	K	18	15	33	Oct. 4		
Private	R. E. Peet	F	18	15	33	May 18		2
Private	E. L. Spier	F	18	15	33	Sept. 3	M. B.	1
Corporal	C. B. Hubbell	A	19	14	33	May 17		6
Captain	F. C. Cochen	D	20	13	33	May 18		4
Sergeant	J. S. Barndollar	B	20	13	33	Nov. 6	M. B.	5
Private	H. Montgomery	F	20	13	33	May 18		1
Corporal	W. R. Cummings	E	11	21	32	Nov. 6	M. B.	1
Sergeant	H. L. Waldo	G	12	20	32	July 26		1
Private	H. Bunker	C	12	20	32	June 11		2
Private	J. W. Sweeney	D	12	20	32	May 18		11
Sergeant	T. O. Callender	A	13	19	32	Sept. 29	M. B.	1
Private	G. B. Adams	G	14	18	32	June 11		3
Private	C. D. Napier	A	14	18	32	May 17		1
Private	C. H. Unckles	B	14	18	32	Aug. 25		
Private	H. F. Blackwell	C	15	17	32	July 26		
Private	G. D. Brumley	C	15	17	32	Nov. 6		
Private	A. R. Fullerton	A	15	17	32	May 17		1
Private	F. H. Mickleborough	F	15	17	32	July 26		1
Private	B. Binis	F	15	17	32	May 18		1
Private	T. Norton, Jr.	F	15	17	32	July 21	M. B.	1
Private	W. M. Summers	D	15	17	32	May 18		9

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	C. E. Martling	I	16	16	32	Aug. 4	M. B.	...
Sergeant	A. Eldredge	C	17	15	32	June 11	...	2
Private	A. L. Boucher	I	17	15	32	May 17	...	1
Private	A. M. Boucher	I	17	15	32	May 17	...	1
Private	E. F. Buchanan	D	17	15	32	Sept. 3	M. B.	...
Private	E. C. Cahill	G	17	15	32	Aug. 25	M. B.	...
Private	F. S. Copperthwait	H	17	15	32	July 4	M. B.	4
Private	P. Cross	K	17	15	32	June 11	...	3
Private	E. H. Dick	F	17	15	32	Aug. 25	M. B.	...
Private	C. L. Fabre	H	17	15	32	Sept. 3	M. B.	...
Private	E. Gorton	A	17	15	32	May 17	...	3
Private	P. Kenyon	G	17	15	32	June 11	...	2
Private	A. Manan	B	17	15	32	July 26	...	2
Private	W. T. Sniffin	H	17	15	32	May 17	...	1
Corporal	C. F. Grandeman	D	18	14	32	May 18	...	1
Private	F. W. Coddington	I	18	14	32	July 26	...	1
First Lieut.	G. W. Middleton	I	19	13	32	May 17	...	4
Corporal	E. M. Querean	B	19	13	32	July 26	...	3
Private	W. L. Burdell	H	19	13	32	Sept. 3	M. B.	2
Private	H. Britton	D	20	12	32	May 18	...	2
Private	E. T. Fanning	I	20	12	32	June 11	...	3
Private	R. Lounsberry	K	20	12	32	June 23	M. B.	5
Private	S. W. Pentz	I	20	12	32	Nov. 6	M. B.	...
Corporal	A. A. Gorman	C	21	11	32	June 11	...	3
Private	J. W. Adams	H	21	11	32	June 9	M. B.	4
Private	P. P. Pope	B	21	11	32	July 26	...	1
Private	C. B. Van Nostrand	A	21	11	32	Sept. 29	M. B.	2
Private	S. C. Leonard	H	10	21	31	Nov. 6	M. B.	...
Private	F. B. Langston	G	12	19	31	July 26	...	...
Private	T. S. Perkins	A	13	18	31	Oct. 4	...	1
First Sergt.	J. D. A. Onderdonk	B	14	17	31	May 17	...	10
Private	A. J. Boyer	B	14	17	31	May 17	...	...
Private	C. T. Collins	I	14	17	31	Oct. 27	M. B.	...
Private	H. B. Barthman	K	15	16	31	June 11	...	1
Private	C. T. Bingham	E	15	16	31	May 17	...	1
Private	C. A. De La Mesa	H	15	16	31	May 17	...	2
Private	H. P. Hildreth	K	15	16	31	June 11	...	11
Private	A. S. Mitchell	I	15	16	31	May 17	...	3
Private	E. C. Osborn	H	15	16	31	May 17	...	2
Private	H. A. Parker	K	15	16	31	Oct. 13	M. B.	...
First Lieut.	W. H. B. Smith	A	16	15	31	June 23	M. B.	1
Sergeant	G. A. Hatch	D	16	15	31	Nov. 6	M. B.	5
Corporal	T. Ormiston	H	16	15	31	Oct. 4	...	3
Private	J. M. Douglas	I	16	15	31	May 17	...	3
Private	W. E. Johnston	B	16	15	31	May 17	...	1
Private	C. R. Wells	D	16	15	31	May 18	...	2
First Sergt.	A. B. Thomas	K	17	14	31	Sept. 3	M. B.	2
Private	R. M. Buttle	D	17	14	31	May 18	...	3
Private	T. Coffin	A	17	14	31	May 17	...	1
Private	A. Franklin	C	17	14	31	Nov. 6	M. B.	1
Private	J. T. Hardy	B	17	14	31	Oct. 4	...	...
Private	E. B. Thurber	A	17	14	31	May 17	...	3
Private	G. W. Washburn	C	17	14	31	July 26	...	1
Private	C. Edw. Waters	K	17	14	31	Sept. 3	M. B.	...
Q. M. Sergt.	B. Bangs	C	18	13	31	June 11	...	4
Private	J. B. DeMott	F	18	13	31	May 18	...	1
Private	G. W. Hanes	H	18	13	31	Aug. 18	M. B.	...
Private	A. E. Letson	H	18	13	31	Sept.	M. B.	1
Private	H. G. Rettig	C	18	13	31	July 4	M. B.	1
Private	H. B. Dorman	A	19	12	31	Sept. 3	M. B.	3
Private	R. C. Kintzing	D	19	12	31	June 9	M. B.	...
Private	C. Schwacofer	G	19	12	31	Oct. 13	M. B.	...
Private	H. J. Bristow	A	20	11	31	July 4	M. B.	1
Private	W. H. Clark	C	20	11	31	Nov. 6	M. B.	...
Private	C. Evans	D	9	21	30	Oct. 13	M. B.	2
Private	P. F. Higgs	A	10	20	30	May 17	...	1
Private	S. G. Lane	B	12	18	30	July 26	...	1
Private	J. E. Skiff	D	12	18	30	July 26	...	3
Corporal	F. A. Croker	K	13	17	30	June 11	...	3
Corporal	W. B. Gray	C	13	17	30	Sept. 19	...	2

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	F. L. Gray	C	13	17	30	June 11		1
Private	E. S. Green	D	13	17	30	Oct. 13	M. B.	
Private	C. E. Lee	H	13	17	30	May 17		2
Private	W. H. Mead	A	13	17	30	July 21	M. B.	
Corporal	S. J. Estey	G	14	16	30	Sept. 3	M. B.	1
Private	G. B. Dickerman	C	14	16	30	Oct. 20		
Private	E. R. Powles	B	14	16	30	Oct. 4		
Private	W. A. Reilly	K	14	16	30	Oct. 4		
Private	R. A. Tucker	A	14	16	30	Sept. 29	M. B.	
Second Lieut.	W. M. Despard	G	15	15	30	July 26		1
Sergeant	C. E. Minshler	H	15	15	30	June 11		
Corporal	A. S. Orchard	D	15	15	30	May 18		3
Private	W. H. Constable	K	15	15	30	June 9	M. B.	
Private	J. Emerson	I	15	15	30	Oct. 13	M. B.	
Private	S. Keeler	G	15	15	30	July 26		1
Private	F. P. Reynolds	I	15	15	30	July 26		
Corporal	C. W. Kayser	C	16	14	30	Sept. 19		4
Corporal	F. H. Norton	F	16	14	30	May 18		2
Private	W. B. Howe	A	16	14	30	Sept. 29	M. B.	
First Lt. & Q.M.	A. A. Thompson	Staff.	17	13	30	May 17		7
Q. M. Sergt.	C. A. Frost	N.C.S.	17	13	30	May 17		12
Corporal	P. H. Case	K	17	13	30	June 23	M. B.	
Corporal	W. W. Ferry	D	17	13	30	May 18		
Corporal	C. J. Fisher	G	17	13	30	July 4	M. B.	6
Corporal	A. E. Plindt	F	17	13	30	May 18		2
Corporal	Geo. Ithell	F	17	13	30	July 26		1
Private	G. M. Bennett	I	17	13	30	May 17		3
Private	H. Chichester	D	17	13	30	May 18		3
Private	C. W. Ruby	G	17	13	30	June 11		8
Private	A. Von Moers	C	17	13	30	June 11		9
Lieut.-Col.	A. C. Smith	Field	18	12	30	Oct. 4		7
Private	C. R. Bostwick	B	18	12	30	June 11		1
Private	P. Leviene	K	18	12	30	Sept. 19		
Private	S. Gomez	B	19	11	30	May 17		1
Private	W. F. Keesler	B	19	11	30	Nov. 6	M. B.	
Private	W. S. Radway	I	19	11	30	Oct. 20		
Private	A. D. Seaver	F	19	11	30	May 18		1
Private	C. F. Burke	I	20	10	30	July 26		2
Private	R. G. Moran	B	20	10	30	Nov. 6	M. B.	1
Private	J. H. Colman, Jr.	H	12	17	29	May 17		
Private	A. L. Mason	A	12	17	29	May 17		1
Private	F. Sears	G	12	17	29	Sept. 19		2
Sergeant	W. H. Stone	K	13	16	29	June 11		7
Private	W. G. F. Class	F	13	16	29	May 18		
Private	A. G. Findlay, Jr.	G	13	16	29	June 11		2
Private	S. F. Yauger	I	13	16	29	Oct. 20		
Corporal	C. Britton	D	14	15	29	May 18		3
Private	W. Du Bois	K	14	15	29	Nov. 6	M. B.	
Private	H. Hall	A	14	15	29	June 9	M. B.	
Private	J. B. Miller	C	14	15	29	Oct. 4		1
Private	G. A. Boyden	I	15	14	29	July 26		4
Private	F. M. Cowperthwait	H	15	14	29	July 26		2
Private	G. W. Seixas	D	15	14	29	May 18		3
Private	E. S. Spink	F	15	14	29	Nov. 6	M. B.	
Private	F. E. Sweet	K	15	14	29	June 11		1
Private	L. P. Towt	E	15	14	29	Nov. 6	M. B.	5
Second Lieut.	E. Hendrickson	E	16	13	29	Nov. 6	M. B.	
Sergeant	F. W. Singleton	I	16	13	29	May 17		4
Corporal	C. E. Nelson	D	16	13	29	July 4	M. B.	6
Private	F. H. Barre	I	16	13	29	Oct. 20		
Private	W. M. Sayer, Jr.	G	16	13	29	Sept. 29	M. B.	
Private	J. J. Shanks	K	16	13	29	Sept. 19		3
Private	W. S. Sillocks, Jr.	G	16	13	29	June 11		2
Captain	D. R. Aldridge	K	17	12	29	June 11		7
Private	C. D. Darling	K	17	12	29	July 26		
Private	E. A. Dubey	F	17	12	29	Sept. 19		
Private	D. W. C. Squires	I	17	12	29	Sept. 19		1
Private	E. H. Storms	K	17	12	29	July 26		1
Private	C. G. Tinker	I	17	12	29	May 17		2
Second Lieut.	R. T. Holly	F	18	11	29	May 18		4

TWENTY-THIRD REGIMENT—(Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	A. J. Constantine, Jr.	D	18	11	29	May 18		3
Private	L. H. Erwin	D	18	11	29	May 18		2
Private	L. McRobbie	F	18	11	29	Oct. 13	M. B.	1
Private	W. H. Meeteer	I	18	11	29	July 18		1
Private	E. L. Miller	A	18	11	29	Sept. 19		3
First Lt. & Adj.	T. W. Sillocks	Staff	19	10	29	May 17		7
Private	F. T. Aldridge	K	20	9	29	June 9	M. B.	6
Private	W. P. Boggs	C	20	9	29	Nov. 6	M. B.	2
Private	D. Woodcock	K	20	9	29	June 11		1
Colonel	J. N. Partridge	Field	22	7	29	May 17		3
Private	L. P. Smith	A	9	19	28	Nov. 6	M. B.	
Private	H. B. Ranken	I	10	18	28	Aug. 15		
Private	W. H. Lyon	A	11	17	28	Oct. 4		
Private	R. R. Orchard	D	11	17	28	May 18		1
Private	G. A. Stohlman	C	11	17	28	June 11		3
Sergeant	J. P. Mulford	E	12	16	28	May 17		8
Private	W. E. Edgerly	I	13	15	28	Oct. 4		
Private	C. F. Hitzelberger	G	13	15	28	June 11		2
Private	R. F. Pearson	I	13	15	28	Oct. 4		
Private	G. H. Potter	I	13	15	28	Oct. 13	M. B.	
Private	A. G. Smith	H	13	15	28	June 11		
Captain	C. F. Guyon	E	14	14	28	Oct. 4		1
Private	E. H. Benedict	I	14	14	28	July 28	M. B.	2
Private	C. Fawcett	K	14	14	28	Aug. 15		
Private	O. E. Goedecke	F	14	14	28	May 18		
Private	J. F. Henry, Jr.	A	14	14	28	May 17		2
Private	J. H. Ingraham	H	14	14	28	July 4		1
Private	C. L. Scofield	H	14	14	28	June 23	M. B.	1
Private	T. L. Stewart	I	14	14	28	Nov. 6	M. B.	
Sergeant	W. C. Holmes	B	15	13	28	July 26		7
Private	J. W. Burke	I	15	13	28	Aug. 15		2
Private	Jno. M. Carrere	A	15	13	28	July 26		
Private	E. S. Gullick	B	15	13	28	Nov. 6	M. B.	
Private	W. H. Spowers	A	15	13	28	Nov. 6	M. B.	
Private	G. A. Street	H	15	13	28	May 17		
Q. M. Sergt.	F. T. Tapley	F	16	12	28	May 18		3
Private	F. W. Arnold	A	16	12	28	Sept. 3	M. B.	
Private	M. J. Beers	E	16	12	28	July 26		1
Private	S. Burger	G	16	12	28	June 11		
Private	C. B. Coates	I	16	12	28	May 17		2
Private	E. J. Cole	I	16	12	28	Oct. 27	M. B.	3
Private	Jos. Horn	E	16	12	28	Nov. 6	M. B.	1
Private	W. Nicholson	B	16	12	28	May 17		1
Private	W. Raynor, Jr.	C	16	12	28	Aug. 11	M. B.	
Q. M. Sergt.	M. Sparke	I	17	11	28	Nov. 6	M. B.	3
Sergeant	G. F. A. Bondies	D	17	11	28	July 4	M. B.	5
Sergeant	E. Haynes	G	17	11	28	Sept. 29	M. B.	6
Corporal	C. E. Estabrook	E	17	11	28	May 17		1
Private	N. S. Carner	E	17	11	28	July 26		5
Private	P. Collonge	I	17	11	28	Oct. 20		
Private	C. C. D. Gott	I	17	11	28	Nov. 6	M. B.	
Private	C. Kelland	H	17	11	28	July 26		
Private	W. F. Lasselle	G	17	11	28	June 11		1
Private	A. H. Muller	A	17	11	28	Sept. 3	M. B.	4
Private	J. S. Peckham	A	17	11	28	May 18		
Private	B. R. Suydam	G	17	11	28	June 11		2
Corporal	F. A. Martin	I	18	10	28	Oct. 13	M. B.	3
Private	F. H. Gillett	I	18	10	28	May 17		2
Private	M. Hartwigson	E	18	10	28	July 26		1
Private	A. N. King	F	18	10	28	June 11		2
Private	A. T. Morro	G	18	10	28	June 11		3
Private	De W. C. Weld	A	18	10	28	June 9	M. B.	1
Private	W. B. Young	A	18	10	28	Aug. 25	M. B.	2
Corporal	W. M. Chapman	H	19	9	28	Nov. 6	M. B.	4
Private	A. B. Pouch	B	19	9	28	July 26		2
Private	E. A. Wheeler	F	20	8	28	May 18		1
Private	P. L. Gibson	K	10	17	27	June 11		
Major	C. E. Waters	Field	11	16	27	Sept. 3	M. B.	10
Private	H. S. Clark	K	11	16	27	Nov. 6	M. B.	
Private	De W. P. Dutcher	G	12	15	27	July 26	M. B.	2

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	N. Hillyer, Jr.	F	12	15	27	May 18		
Private	G. B. Hopkins	C	12	15	27	June 11		2
Private	F. H. Sherman	C	12	15	27	July 26		1
Private	H. B. Towt	D	12	15	27	Oct. 4		1
Private	W. S. Vail	H	12	15	27	July 26		
Sgt. & R. G. G.	H. M. Peckham	N. C. S	13	14	27	June 11		3
Sergeant	H. C. Thorn	F	13	14	27	May 18		1
Sergeant	C. G. Todd	K	13	14	27	July 14	M. B.	6
Private	H. H. Guhrauer	B	13	14	27	Sept. 29	M. B.	
Private	A. B. Kolyer, Jr.	H	13	14	27	July 26		
Private	E. L. Magnus	B	13	14	27	May 17		3
Private	J. A. McCarthy	H	13	14	27	Oct. 13	M. B.	1
Private	E. P. Merrill	I	13	14	27	May 17		3
Private	W. J. Van O'Linda	F	13	14	27	May 18		
Private	W. H. Wright	C	13	14	27	June 9	M. B.	1
Cap. & As. Sur.	H. L. Cohran	Staff	14	13	27	May 17		3
Q. M. Sergt.	P. J. Langler	D	14	13	27	June 11		3
Private	C. F. Abbott	H	14	13	27	Nov. 6	M. B.	
Private	E. J. Brewster	B	14	13	27	Nov. 6	M. B.	
Private	W. F. De Nyse	C	14	13	27	June 11		7
Private	Jos. Froehlich	G	14	13	27	July 26		1
Private	J. W. Mason	F	14	13	27	May 18		2
Private	W. Olmsted	B	14	13	27	Nov. 6	M. B.	
Private	C. G. Scofield	H	14	13	27	June 9	M. B.	1
Private	H. G. Wiley	I	14	13	27	June 23	M. B.	2
Private	F. Wilson	K	14	13	27	Oct. 4		
First Lieut.	W. S. Banta	C	15	12	27	Oct. 4		7
First Sergt.	W. T. Colyer	E	15	12	27	Nov. 6	M. B.	
Sergeant	C. E. Elford	E	15	12	27	Nov. 6	M. B.	3
Corporal	C. S. Carscallen	I	15	12	27	June 11		3
Corporal	E. I. J. Mostert	C	15	12	27	June 11		3
Private	A. D. Brown	H	15	12	27	Oct. 4		1
Private	G. W. Dally	I	15	12	27	Oct. 13	M. B.	
Private	L. L. Quereau	B	15	12	27	Oct. 13	M. B.	2
Private	J. M. Vose	C	15	12	27	July 26		1
Sergeant	W. H. Handy	I	16	11	27	Aug. 15		3
Corporal	H. B. Bierling	K	16	11	27	July 26		3
Corporal	F. A. Wilson	A	16	11	27	July 21	M. B.	3
Private	C. J. Brackett	I	16	11	27	Nov. 6	M. B.	
Private	H. R. Breuster	B	16	11	27	June 11		3
Private	A. S. Farwell	F	16	11	27	May 18		
Private	H. E. Goedecke	F	16	11	27	Aug. 25	M. B.	1
Private	S. W. Northridge	C	16	11	27	June 11		1
Private	E. W. F. Sproul	K	16	11	27	June 11		1
Captain	H. L. Crane	G	17	10	27	July 26		4
Q. M. Sergt.	Jos. Brewster	B	17	10	27	July 26		1
Corporal	F. L. Sparks	H	17	10	27	May 17		1
Private	G. A. Annable	E	17	10	27	May 17		1
Private	W. A. Hockemeyer	I	17	10	27	May 17		2
Private	T. S. Pendreigh	I	17	10	27	Nov. 6	M. B.	
Private	A. L. Powelson	I	17	10	27	Oct. 29	M. B.	
Private	T. F. Read	A	17	10	27	Oct. 4		
Private	A. L. Tinker	F	17	10	27	May 18		2
Second Lieut.	C. R. Silkman	C	18	9	27	June 11		2
Sergeant	W. P. Blackman	C	18	9	27	June 11		6
Corporal	G. C. Travis	K	18	9	27	June 11		2
Private	H. A. Dodworth	C	18	9	27	Aug. 11	M. B.	1
Private	G. B. Glover	H	18	9	27	Oct. 4		1
Private	S. Manley	C	18	9	27	Nov. 6	M. B.	
Private	R. D. Mellick	I	18	9	27	May 17		3
Private	J. L. Phillips	I	18	9	27	May 17		3
Private	B. H. Smith	A	18	9	27	May 17		1
Private	G. W. Bell	I	19	8	27	Nov. 6	M. B.	
Private	A. G. Sherwood	I	20	7	27	Nov. 6	M. B.	
Private	S. R. White	G	9	17	26	June 11		
Corporal	W. H. Bradley	F	10	16	26	Sept. 19		3
Private	F. A. Berdu	K	10	16	26	June 9	M. B.	1
Private	W. H. Cammerer, Jr.	A	10	16	26	June 23	M. B.	2
Private	M. F. Cook	K	10	16	26	June 11		4
Private	E. Dodge	F	11	15	26	May 18		2

TWENTY-THIRD REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	H. L. O'Brien	E	11	15	26	Oct. 4		
Private	R. L. Rathbone	F	11	15	26	July 26		
Private	J. W. Raymond	I	11	15	26	Sept. 29	M. B.	1
Private	W. E. Wiese	A	11	15	26	May 17		1
First Sergt.	Q. C. De Grove, Jr.	G	12	14	26	June 11		2
Private	N. Bolet	B	12	14	26	May 17		1
Private	F. H. Corduan	E	12	14	26	July 26		1
Private	W. Foster	K	12	14	26	July 26		2
Private	E. M. Grout	A	12	14	26	June 9	M. B.	1
Private	C. H. Keutgen	A	12	14	26	June 9	M. B.	5
Private	H. S. Poole	I	12	14	26	Oct. 4		
Private	H. Spelman	A	12	14	26	May 18		
Private	T. C. Tredwell	B	12	14	26	May 17		1
Private	F. U. Walford	C	12	14	26	June 23	M. B.	1
Second Lieut.	F. Dunderdale	E	13	13	26	May 17		1
Sergeant	C. B. Denny	A	13	13	26	May 17		1
Private	F. Beasley	I	13	13	26	Oct. 27	M. B.	
Private	C. F. Cartledge	C	13	13	26	Nov. 6	M. B.	
Private	R. B. Constantine	A	13	13	26	Oct. 4		1
Private	G. H. Grapel	K	13	13	26	June 11		3
Private	C. H. Randelbrock	I	13	13	26	June 11		2
Private	E. M. Taylor	C	13	13	26	Nov. 6	M. B.	1
Private	R. A. Willard	K	13	13	26	Oct. 4		
Private	W. G. Wooley	K	13	13	26	Nov. 6	M. B.	
Private	G. B. Adams	B	14	12	26	May 17		2
Private	M. Sniffin	I	14	12	26	Oct. 4		
Private	V. Sweeney	D	14	12	26	May 18		
Private	E. S. Van Vleck	G	14	12	26	June 11		2
Sergeant	W. S. Woodrow	A	15	11	26	May 17		2
Corporal	L. W. Ropes	K	15	11	26	June 11		1
Private	F. N. Allen	C	15	11	26	Oct. 20		
Private	J. M. Dillon	D	15	11	26	May 18		
Private	C. D. Hubbard	K	15	11	26	June 11		1
Private	W. Ketcham	D	15	11	26	July 4	M. B.	
Private	W. B. Winslow, Jr.	E	15	11	26	May 17		
Com. Sergt.	W. B. Despard	N.C.S	16	10	26	May 17		10
First Sergt.	W. R. Wilson	C	16	10	26	June 11		3
Private	H. D. Abberly	D	16	10	26	May 18		2
Private	H. H. Macdonald	A	16	10	26	Oct. 4		3
Private	R. A. Lau	I	17	9	26	June 23	M. B.	1
Private	H. E. Lockwood	H	17	9	26	July 26		
Private	R. A. Meyer	I	17	9	26	May 17		3
Private	T. H. Story	H	17	9	26	June 9	M. B.	1
Sergeant	R. F. O. Frickenhaus	A	18	8	26	May 17		6
Sergeant	A. W. Schenck	F	18	8	26	May 18		4
Corporal	A. Staudinger	A	18	8	26	May 17		3
Private	G. W. De Vor, Jr.	D	18	8	26	May 18		4
Private	R. F. Betts	E	19	7	26	Nov. 6	M. B.	
Private	E. H. Frothingham	A	19	7	26	May 17		1
Private	J. S. Garrison	F	19	7	26	May 18		1
Private	D. P. Mygatt	F	19	7	26	Aug. 25	M. B.	
Private	W. N. Pye	E	19	7	26	July 26		1
Private	W. F. Herbert, Jr.	H	20	6	26	June 9	M. B.	
Private	L. W. Kimball	H	21	5	26	May 17		2
Second Lieut.	C. E. Hubbard	H	10	15	25	Aug. 4	M. B.	1
Private	E. L. Hall	F	10	15	25	May 18		
Private	C. Sutton	C	10	15	25	Oct. 4		
Private	S. M. Wood	H	10	15	25	Aug. 15		2
Corporal	W. G. Ten Eyck	H	11	14	25	June 11		4
Private	F. W. Barnaby	I	11	14	25	June 11		3
Private	C. T. Burtiss	A	11	14	25	Nov. 6	M. B.	
Private	R. A. Fordham	I	11	14	25	May 17		3
Private	M. Leggett	H	11	14	25	Nov. 6	M. B.	
Private	W. E. Matthews	A	11	14	25	May 17		1
Private	E. H. Barnum	K	12	13	25	June 11		
Private	E. H. Goodwin	A	12	13	25	Nov. 6	M. B.	
Private	C. N. Leach	I	12	13	25	May 17		1
Private	W. R. Pentz	C	12	13	25	June 23	M. B.	
Private	C. G. Rasmus	A	12	13	25	Sept. 29	M. B.	
Second Lieut.	D. K. Case	K	13	12	25	June 11		1

TWENTY-THIRD REGIMENT — (*Concluded*).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Second Lieut.	Edward Morris	A	13	12	25	May 17		1
Corporal	F. Wilson	H	13	12	25	May 17		1
Private	G. A. Barnett	B	13	12	25	May 17		2
Private	C. Bolet	K	13	12	25	June 11		1
Private	E. B. Campbell	K	13	12	25	Oct. 20		
Private	A. W. Clark	I	13	12	25	June 11		1
Private	E. J. Hartman	H	13	12	25	Sept. 3	M. B.	
Private	L. W. Willets	E	13	12	25	Oct. 4		1
Corporal	F. De La Vergne	E	14	11	25	May 17		2
Private	G. C. Hale	K	14	11	25	Oct. 4		
Private	T. F. Smith	I	14	11	25	June 11		2
Private	W. H. Smith	H	14	11	25	Oct. 4		
Private	J. Warrack	K	14	11	25	Nov. 6	M. B.	
Sgt. & L. G. G.	L. L. Quereau	N.C.S.	15	10	25	May 17		4
First Sergt.	C. P. Duffee	A	15	10	25	Aug. 25	M. B.	1
Q. M. Sergt.	A. S. Gomers	K	15	10	25	June 11		9
Q. M. Sergt.	C. Symons	H	15	10	25	July 26		1
Private	E. E. Hodges	K	15	10	25	June 23	M. B.	
Private	W. C. Kimball	K	15	10	25	Oct. 4		
Corporal	D. B. Cole	B	16	9	25	July 26		1
Corporal	L. J. Preager	A	16	9	25	May 17		2
Corporal	E. Storer	B	16	9	25	Oct. 4		1
Corporal	E. S. Turner	I	16	9	25	May 17		3
Private	H. T. Armstrong	K	16	9	25	July 26		
Private	Eugene Boucher	I	16	9	25	June 11		1
Private	R. N. Chichester	H	16	9	25	May 17		1
Private	B. O'Connor	A	16	9	25	Nov. 6	M. B.	
Private	E. Packer	F	16	9	25	May 18		
Private	J. Phayre	G	16	9	25	June 11		1
Private	J. C. Vanderveer	I	16	9	25	May 17		3
Private	H. H. Walker	G	16	9	25	July 26		
Sgt. & Col. Br.	G. H. Thomas	N.C.S.	17	8	25	July 26		3
Sergeant	J. F. Handy	I	17	8	25	Aug. 18	M. B.	3
Private	C. C. Bowen	A	17	8	25	Aug. 25	M. B.	1
Private	J. K. Caldwell	F	17	8	25	Oct. 13	M. B.	2
Private	W. E. Herd	H	17	8	26	July 26		2
Private	W. E. Nevins	H	17	8	25	July 26		
Private	H. E. Sturtevant	F	17	8	25	June 11		3
Private	W. F. Townsend	I	17	8	25	Oct. 4		3
Second Lieut.	T. M. Close	B	18	7	25	Nov. 6	M. B.	1
Private	J. H. Boynton	G	18	7	25	June 11		1
Private	R. R. Grinnell	K	18	7	25	Nov. 6	M. B.	
Private	G. W. Mott	D	18	7	25	May 18		2
Private	C. S. Rodman	A	18	7	25	May 17		
Private	H. A. Rodrigue	B	18	7	25	Oct. 4		1
Captain	H. C. Everdell	A	19	6	25	May 17		5
Private	George Barley	I	19	6	25	June 11		2
Private	W. A. Beeken	I	19	6	25	May 17		4
Private	W. F. Penny	I	19	6	25	May 17		3
Private	J. S. Strouse	A	19	6	25	June 23	M. B.	
Captain	B. C. Thorn	F	20	5	25	May 18		4

Total..... 549

THIRTY-SECOND REGIMENT.

(Figure of merit..... 31.57.)

Name.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Major.....	Edward Verdeckberg.....	Field	18	21	39	Aug. 13	.....	8
Captain.....	F. G. Winter (Asst. Sur.)..	Staff.	22	17	39	Aug. 13	.....	4
Orderly Sergt	Otto Langsdorff.....	N.C.S	17	19	36	Aug. 13	.....	11
Sergeant.....	C. M. Boller (L. G. G.)....	N.C.S	19	16	35	Nov. 6	C. M. C.	3
First Lieut...	J. R. Teel (Q. M.).....	Staff.	18	16	34	Sept. 25	.....	2
Sergt. Major..	Jacob Manz, Jr.....	N.C.S	14	18	32	Aug. 13	.....	9
Private.....	H. Crowell.....	H	17	15	32	Sept. 25	.....	.....
Sergeant.....	J. W. York.....	A	14	17	31	Sept. 25	.....	2
Private.....	E. Magnus, Jr.....	F	20	11	31	Nov. 6	C. M. C.	.....
Second Lieut.	Wm. Luthy.....	H	16	14	30	Aug. 18	C. M. C.	3
First Lieut...	W. Vander Clute, Jr. (Adj.)	Staff.	18	12	30	Aug. 13	.....	9
Corporal.....	G. Muller.....	F	11	11	30	Sept. 25	.....	2
Captain.....	G. H. Bishop.....	A	19	18	29	Sept. 25	.....	1
Private.....	George Olmski.....	B	13	16	29	Sept. 25	.....	.....
Captain.....	John J. Klein.....	G	15	14	29	Aug. 13	.....	12
Private.....	L. Baltzler.....	D	16	13	29	Aug. 13	.....	.....
Second Lieut.	J. A. Jochum.....	G	17	12	29	Sept. 25	.....	.....
Private.....	S. Newell.....	D	16	12	28	Aug. 13	.....	1
Captain.....	Van D. Macumber (I. R. P.)	Staff.	17	11	28	Oct. 26	.....	3
Private.....	A. C. Winchester.....	G	17	11	28	Aug. 13	.....	.....
Private.....	H. Langsdorff.....	A	18	10	28	Aug. 13	.....	.....
Sergeant.....	M. G. Sebroder.....	G	9	18	27	Sept. 25	.....	2
Q. M. Sergt...	S. B. Richmond.....	N.C.S	15	12	27	Aug. 13	.....	6
Private.....	H. Crawford.....	D	15	12	27	Aug. 13	.....	.....
Captain.....	E. J. Renison.....	B	16	11	27	Aug. 13	.....	2
Major.....	J. T. Valentine (Surg.)....	Staff.	18	9	27	Aug. 13	.....	9
Corporal.....	John Beckhouse.....	C	18	9	27	Aug. 13	.....	2
Corporal.....	C. Schoeneck.....	I	15	11	26	Sept. 25	.....	.....
Sergeant.....	G. D. Russell.....	C	15	11	26	Nov. 6	C. M. C.	.....
Corporal.....	R. M. Abesser.....	D	16	10	26	Aug. 13	.....	1
Private.....	Wm. Walter.....	G	17	9	26	Aug. 13	.....	.....
Second Lieut.	L. R. Wood.....	I	19	7	26	Aug. 13	.....	2
Corporal.....	John Rosinkranz.....	D	6	19	25	Sept. 25	.....	1
Private.....	L. Steinecker.....	D	11	14	25	Sept. 25	.....	1
Private.....	John Pabst.....	C	12	13	25	Sept. 25	.....	.....
Q. M. Sergt...	O. J. Beckford.....	A	13	12	25	Aug. 13	.....	2
Corporal.....	Charles Miller.....	B	13	12	25	Sept. 25	.....	.....
Captain.....	E. J. McGlyn.....	D	14	11	25	Aug. 13	.....	2
Corporal.....	C. Evans.....	D	16	9	25	Sept. 25	.....	2
Private.....	John Rooney.....	F	16	9	25	Aug. 13	.....	.....
Private.....	C. Young.....	D	16	9	25	Aug. 13	.....	.....
Q. M. Sergt...	Wm. Crawford.....	D	17	8	25	Sept. 25	.....	6
Private.....	S. Holsworth.....	D	17	8	25	Aug. 13	.....	.....

Total..... 43

FORTY-SEVENTH REGIMENT.

(Figure of merit..... 49.09.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private.....	C. C. Myer*.....	I	19	24	43	Aug. 6	.....	1
Corporal.....	S. J. Ednie.....	G	17	23	40	Aug. 4	C. M. C.	1
Private.....	R. H. Harding, Jr.....	I	19	21	40	Nov. 6	C. M. C.	3
Corporal.....	F. G. P. Barlow.....	F	18	21	39	May 12	.....	2
Corporal.....	H. M. Baker, Jr.....	I	18	19	37	Aug. 6	.....	3

FORTY-SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
First Sergt.	R. H. Smith	K	16	20	36	June 6		3
Sergeant	P. Mead (L. G. G.)	N.C.S	17	19	36	June 6		3
Private	S. H. Moore	K	17	19	36	June 6		
Private	G. H. Frazer	G	19	17	36	May 10		3
Lieut.-Col	F. S. Benson	Field	20	16	36	June 6		3
Private	C. E. Fisher	F	17	18	35	Nov. 6	C. M. C.	2
Private	A. McMullen	B	17	18	35	June 6		2
Captain	W. R. Pettigrew	G	19	16	35	Aug. 11	C. M. C.	6
Sergeant	A. F. Englehardt	F	15	19	34	Aug. 6		1
Private	M. H. Burke	G	15	19	34	Oct. 5		1
Private	C. W. Ruby	B	15	19	34	Oct. 5		3
Captain	H. H. Quick	E	17	17	34	June 6		3
Second Lieut.	H. L. Bartlett	D	17	17	34	June 6		
Private	W. J. Speckeler	K	17	17	34	May 8		
Captain	G. C. Jeffery (Asst. Surg.)	Staff.	15	18	33	June 6		2
Private	J. J. Godfrey	K	16	17	33	June 6		2
First Sergt.	B. R. Meserole	A	17	16	33	June 6		5
Major	J. G. Eddy	Field	19	14	33	June 6		11
Private	C. A. Peffers	D	19	14	33	Aug. 6		1
Captain	J. B. Christoffel, Jr.	D	20	13	33	June 6		9
Private	A. C. Chase	G	21	12	33	Oct. 5		
Private	T. A. McWhinney	E	16	16	32	Oct. 5		
Corporal	T. F. Hobby	F	17	15	32	June 6		3
Corporal	R. H. Ketchum	I	17	15	32	June 6		
Private	J. M. Delmhorst	A	17	15	32	July 4	C. M. C.	1
Private	T. J. G. Hale	F	17	15	32	June 6		
Private	J. H. Martin	I	17	15	32	Aug. 6		1
Captain	F. J. Veritzan	A	18	14	32	June 6		4
First Sergt.	J. F. Clarey	D	19	13	32	June 6		2
Major	E. H. Ashwin (Surg.)	Staff	20	12	32	June 6		
Corporal	W. R. Burdett	G	13	18	31	Oct. 5		2
Private	W. H. Golden	K	13	18	31	June 6		
Corporal	W. Yerks	K	17	14	31	Aug. 6		
First Lieut.	Edw. Milner (Q.M.)	Staff	18	13	31	June 6		
Corporal	L. W. O. Connor	D	18	13	31	May 12		2
Corporal	J. L. Gillis	F	19	12	31	June 6		1
Colonel	E. F. Gaylor	Field	20	11	31	June 6		12
Corporal	W. F. Rover	K	20	11	31	June 6		2
Sergeant	C. E. W. Forest	F	10	20	30	June 6		1
Corporal	J. J. Dixon, Jr.	F	11	19	30	June 6		3
Private	L. Kappas	K	14	16	30	Oct. 5		1
Private	J. M. Smyth	K	14	16	30	June 6		1
Ord. Sergt.	W. L. Coultas	N.C.S	15	15	30	July 21	C. M. C.	2
Q. M. Sergt.	J. A. Royer	D	15	15	30	June 6		1
Corporal	John Wilson	E	15	15	30	June 6		
Private	G. W. Breckenridge	G	15	15	30	June 6		
Private	R. M. Stokes	F	15	15	30	Aug. 6		1
Private	J. P. Salisbury	G	15	15	30	Oct. 5		
Sergeant	H. C. O. Schlegel	D	16	14	30	June 6		2
Private	John Shannon	K	17	13	30	July 4	C. M. C.	1
Sergeant	H. C. Lyon	A	18	12	30	July 4	C. M. C.	3
First Lieut.	F. Harrison	A	19	11	30	Oct. 5		
Private	Le Grand Sturgis	F	20	10	30	June 6		3
Q. M. Sergt.	F. E. Shipman	N.C.S	21	9	30	July 21	C. M. C.	4
Private	C. G. Smith	G	21	9	30	July 4	C. M. C.	1
Private	E. G. Parker	D	10	19	29	Aug. 6		
Private	J. T. Bishop	K	11	18	29	Sept. 3	C. M. C.	
Private	J. T. G. Middleton	D	12	17	29	June 6		1
Private	W. Krogsrand	D	14	15	29	Sept. 3	C. M. C.	
Private	W. J. Wilson	F	14	15	29	Nov. 6	C. M. C.	1
Private	R. W. H. Wood	F	16	13	29	Aug. 6		
Private	W. R. Collins	G	17	12	29	Oct. 5		3
Private	C. E. J. Devan	E	17	12	29	June 6		
Q. M. Sergt.	J. H. Saill	G	18	11	29	June 6		1
Sergeant	C. E. Wilkinson	F	18	11	29	Aug. 6		2
Private	E. L. Imlay	D	19	10	29	June 6		
Private	N. S. G. Bishop	D	11	17	28	June 6		1
Captain	A. G. Brown (I. R. P.)	Staff.	14	14	28	June 6		13
Private	S. W. Haight	K	14	14	28	July 21	C. M. C.	1
Corporal	W. J. Pell, Jr.	G	15	13	28	June 6		1

FORTY-SEVENTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	H. N. Hughes	D	15	13	28	Aug. 6		
First Lieut.	W. H. Hubbell (Adj.)	Staff.	16	12	28	June 6		2
Private	J. N. Furstone, Jr.	F	16	12	28	May 8		2
Private	T. H. Hudson	K	16	12	28	June 6		1
First Lieut.	W. C. Roe	E	17	11	28	Aug. 6		1
Private	A. L. Muller	I	17	11	28	June 6		
Private	G. B. Sarles, Jr.	G	17	11	28	Aug. 6		
Sergeant	C. A. Struber, (C. B.)	N.C.S	18	10	28	June 6		3
Sergeant	H. D. Van Zandt	F	18	10	28	Aug. 6		6
Private	A. W. Pell	G	19	9	28	June 6		
Private	M. J. Walsh	F	9	18	27	June 6		1
Private	R. E. McConnell	A	10	17	27	Oct. 5		
Private	T. H. Lee	F	12	15	27	Aug. 6		
Private	W. G. Elliott	G	13	14	27	June 6		2
Private	F. Miller	F	13	14	27	Oct. 5		
Sergeant	E. D. Strong	E	14	13	27	June 6		1
First Sergt.	T. F. Carroll	G	15	12	27	Aug. 6		1
Sergeant	B. F. Daly	A	15	12	27	June 6		1
Private	N. Hart	G	15	12	27	Aug. 6		1
Private	T. H. Dickson	B	16	11	27	June 6		
First Lieut.	J. W. Barlow	I	17	10	27	June 6		3
Corporal	N. Roscoe	D	17	10	27	Oct. 5		2
Private	S. A. Cook	G	17	10	27	Oct. 5		
Private	C. Casper	K	18	9	27	Oct. 5		
Private	G. R. Leonard	F	18	9	27	Aug. 6		
Private	W. T. Townsend	E	18	9	27	June 6		2
Private	C. P. Tickell	D	19	8	27	Aug. 6		1
Sgt.-Major	W. H. Travis	N.C.S	20	7	27	June 6		2
Q. M. Sergt.	C. H. Ridgeway	K	20	7	27	June 6		9
Sergeant	W. J. Kelly	I	11	15	26	June 6		1
Private	K. Hoffmeier	K	11	15	26	June 6		
First Lieut.	E. F. Christoffel	D	12	14	26	Aug. 6		2
Sergeant	C. W. Brunner (H. S.)	N.C.S	12	14	26	Sept. 3	C. M. C.	1
Sergeant	H. D. McCutcheon	K	12	14	26	Oct. 5		2
Private	A. Berdger	E	11	14	26	Oct. 5		
Sergeant	C. W. Clugherz	I	13	13	26	June 6		
Private	R. E. Harper	K	13	13	26	June 6		
Captain	C. A. Denike	F	14	12	26	June 6		1
First Sergt.	F. H. Hobby	F	14	12	26	June 6		5
Corporal	W. T. Johnston	B	15	11	26	Aug. 6		
Corporal	F. E. Letts	K	15	11	26	June 6		
Private	T. F. Burns	A	15	11	26	Nov. 6	C. M. C.	1
Private	R. Marshall	F	15	11	26	Oct. 5		
Private	M. B. Maguire	I	15	11	26	Sept. 25		1
Private	G. E. Nelson	F	15	11	26	Aug. 6		1
Private	E. W. Stetcher	K	15	11	26	June 6		1
Sergeant	Jos. Chandler	K	16	10	26	Aug. 6		1
Private	J. J. Decker, Jr.	K	16	10	26	June 6		1
Private	F. L. Palmier	K	16	10	26	Oct. 5		1
Private	A. W. Winchler	F	16	10	26	June 6		8
Captain	F. J. LeCount, Jr.	K	17	9	26	May 10		10
Corporal	S. H. Dreer	I	17	9	26	Aug. 6		
Sergeant	W. H. Geary	G	18	8	26	July 4	C. M. C.	1
Private	D. E. Nicholson	K	19	7	26	Aug. 6		4
First Lieut.	C. H. McIlvaine	B	20	6	26	July 14	C. M. C.	1
Private	Thos. Graham	K	10	15	25	Nov. 6	C. M. C.	1
Private	E. A. Hintago	F	10	15	25	June 6		2
Q. M. Sergt.	J. R. Anderson	A	12	13	25	June 6		2
Second Lieut.	G. E. Libbey	G	13	12	25	June 6		3
First Sergt.	G. J. Montgomery	B	13	12	25	June 6		1
Corporal	F. L. Firm	D	13	12	25	June 6		2
Private	P. Neuwrith	F	13	12	25	Aug. 6		1
Corporal	T. E. Jackson	D	14	11	25	Oct. 5		
Private	E. Checkley	I	14	11	25	June 6		1
Private	R. B. Weeks	I	14	11	25	Aug. 6		
Second Lieut.	A. P. Cobb	A	15	10	25	June 6		1
Q. M. Sergt.	H. H. Hemmings	F	15	10	25	Aug. 6		2
Private	R. C. Fabb	G	15	10	25	Sept. 3	C. M. C.	
Private	Chas. Ludwigson	B	15	10	25	Oct. 5		
Private	T. F. Cary	D	16	9	25	July 4	C. M. C.	1

FORTY-SEVENTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. M. Kinnison	F	16	9	25	Aug. 6	.....	.....
Private	W. H. Seibert	A	16	9	25	June 6	.....	5
Private	H. Spencer	B	16	9	25	Aug. 6	.....	2
Private	Edw. Walker	K	16	9	25	June 6	.....	1
Private	John Walters	G	17	8	25	Oct. 5	.....	.....
Private	W. J. Gordon	A	18	7	25	June 6	.....	2
Private	E. A. Nash	F	18	7	25	June 6	.....	.....
Captain	W. H. Eddy	I	19	6	25	Aug. 6	.....	10

Total..... 153

SEVENTEENTH SEPARATE COMPANY.

(Figure of merit..... 70.63.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal	J. F. Klein *	23	25	48	Sept. 11	C. M. C.	3
Corporal	G. F. Gunyan *	21	21	42	Aug. 4	C. M. C.	5
Sergeant	J. J. Simmons	23	17	40	June 20	.....	11
Captain	T. Miller, Jr.	17	18	35	June 20	.....	10
Private	H. H. Lawrence	17	18	35	Sept. 24	.....	5
Second Lieut.	H. C. Combes	16	18	34	Oct. 27	C. M. C. ....	.....
Corporal	W. P. Walsh	20	13	33	Sept. 24	.....	3
Private	J. D. Hanlon	17	15	32	June 20	.....	1
Private	M. S. Wood	17	15	32	Sept. 24	.....	3
Sergeant	A. T. Shepard	18	14	32	July 28	C. M. C.	6
Private	W. J. Lake	18	14	32	June 20	.....	4
Private	Jas. Finlayson	19	13	32	June 20	.....	4
Private	M. C. Hogan	12	19	31	Sept. 29	C. M. C.	1
Private	W. L. Crowell	14	17	31	Sept. 24	.....	.....
Corporal	J. D. Burtis	17	13	30	June 20	.....	2
Private	H. R. Bogert	19	11	30	June 9	C. M. C.	1
Private	J. H. Walker	19	11	30	July 4	C. M. C.	1
Private	G. Walsh, Jr.	16	13	29	Oct. 13	C. M. C.	1
Private	H. E. Gosling	17	12	29	July 4	C. M. C.	1
Private	J. A. Pratt	17	12	29	Sept. 24	.....	5
Private	T. L. Proctor	17	12	29	Sept. 24	.....	1
Private	C. H. Carpenter	14	14	28	June 20	.....	.....
Private	M. Fogerty	15	13	28	June 20	.....	.....
Private	J. C. Herrick	15	13	28	Sept. 29	C. M. C.	2
Private	S. R. Gourley	17	11	28	Sept. 24	.....	.....
Private	G. Schilling	17	11	28	Sept. 24	.....	.....
First Lieut.	F. N. Bell	19	9	28	June 20	.....	8
Sergeant	W. R. Prall	12	15	27	June 20	.....	7
Private	T. F. Moore	12	15	27	June 20	.....	1
Private	Wm. Schilling	14	13	27	Sept. 24	.....	3
Q. M. Sergt.	G. W. Haviland, Jr.	15	12	27	June 20	.....	11
Private	L. V. Nimmo	16	11	27	Sept. 24	.....	.....
Private	W. H. D. Nimmo	17	10	27	June 20	.....	1
Sergeant	R. H. Baker	14	12	26	June 20	.....	10
Private	H. E. Robinson	15	11	26	Aug. 25	C. M. C. ....	.....
Private	L. C. Masters	17	9	26	June 20	.....	.....
Private	A. E. Howard	11	14	25	July 4	C. M. C.	1
Private	J. H. C. Timmerman	12	13	25	Sept. 3	C. M. C. ....	.....
Sergeant	W. F. Boardman	16	9	25	June 20	.....	8
Corporal	R. J. Lowden	16	9	25	Sept. 24	.....	6
Private	C. J. South	16	9	25	Sept. 24	.....	.....

Total..... 41

THIRD BRIGADE.

(Figure of merit..... 56.13.)

GENERAL AND STAFF.

(Figure of merit..... 10.00.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Major	C. H. Gaus* .....	....	22	25	47	Sept. 6	C. M. C.....	6

Total 1

TENTH BATTALION.

(Figure of merit..... 48.36.)

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Lieut.-Col....	W. E. Fitch*	Field	23	25	48	June 21	C. M. C.....	6
Ord. Sergeant	James I. Miles*	N.C.S	22	25	47	Sept. 20	C. M. C.....	6
Private	S. Schreiber*	B	22	24	46	Oct. 4	C. M. C.....	4
Captain	E. V. Denison*	D	23	23	46	Nov. 6	C. M. C.....	10
Private	G. P. Hilton*	A	22	23	45	Nov. 6	C. M. C.....	...
Corporal	A. J. Rennie*	B	23	22	45	Oct. 12	C. M. C.....	3
Private	C. M. Underwood*	B	21	23	44	Nov. 6	C. M. C.....	...
Q. M. Sergt...	B. R. Spelman, Jr*	N.C.S	22	22	44	Oct. 27	C. M. C.....	10
First Lieut...	G. James Greene*	B	21	22	43	Nov. 6	C. M. C.....	5
Private	J. E. Smith*	A	21	22	43	Sept. 20	C. M. C.....	3
Sergeant	James Roach*	C	19	23	42	Oct. 27	C. M. C.....	3
Second Lieut.	A. W. LaRose*	D	20	22	42	Nov. 6	C. M. C.....	5
Q. M. Sergt...	M. W. Stickney*	B	20	22	42	Sept. 20	C. M. C.....	6
Sergeant	C. S. Byington*	A	21	21	42	Oct. 27	C. M. C.....	2
Captain	H. P. Staepole	B	19	20	39	Nov. 6	C. M. C.....	3
Private	C. R. LaRose	B	20	19	39	Nov. 6	C. M. C.....	1
Private	F. Lathrop	A	19	19	38	July 7	C. M. C.....	...
Second Lieut.	A. L. Judson	A	18	19	37	July 19	...	5
Sergeant	Chris. Gresham	C	20	17	37	June 26	...	4
Private	E. Morey	D	18	18	36	June 11	...	4
Private	P. Cavert	A	20	16	36	June 27	...	...
First Sergt...	C. P. Williams	A	18	17	35	June 27	...	2
Corporal	P. DuBois	A	21	14	35	July 7	...	3
Second Lieut.	A. E. Batchelder	B	18	16	34	June 4	...	4
Private	S. Y. Southard	A	20	14	34	Oct. 18	C. M. C.....	2
Private	H. S. Apple	D	19	14	33	June 11	...	2
Corporal	G. W. Arris	C	16	16	32	June 26	...	2
Private	F. S. Snow	A	17	15	32	Sept. 6	C. M. C.....	...
Captain	J. L. Hyatt	C	18	14	32	Oct. 26	...	4
Private	H. E. Doney	B	18	18	31	June 4	...	...
Private	W. M. DeBarthe	B	15	16	31	Oct. 26	...	3
Sergeant	Wm. Baker	D	16	15	31	June 11	...	2
Private	E. McN. Mann	B	17	14	31	July 19	...	3
Private	G. Leonard	A	18	13	31	July 19	...	...
Private	W. L. Corliss	B	16	14	30	Oct. 26	...	3
Private	H. Roth	C	16	14	30	July 19	...	1
Private	E. H. France	C	17	13	30	Aug. 4	...	...
Com. Serg't...	W. G. Thompson	N.C.S	18	12	30	July 19	...	...
Private	E. W. Vine	A	19	11	30	Nov. 1	C. M. C.....	1
Private	E. A. Blessing	B	18	16	29	Sept. 6	C. M. C.....	1

TENTH BATTALION — (Concluded).

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Captain.....	A. J. Wing.....	A	17	12	29	June 27	.....	3
Private.....	E. C. Leonard.....	A	17	12	29	July 19	.....	1
Private.....	F. C. Luby.....	C	17	12	29	June 26	.....	1
Private.....	T. A. Ryan.....	D	17	12	29	Sept. 1	.....	1
Sgt. Major.....	Theo. Gardner.....	N.C.S	18	11	29	Oct. 26	.....	1
Private.....	W. B. Sherwood.....	B	19	10	29	July 19	.....	.....
Private.....	E. E. Larkin.....	A	13	15	28	Oct. 18	C. M. C.	1
First Lieut.....	A. W. Pray.....	A	15	13	28	June 27	.....	3
Sergeant.....	T. J. Van Antwerp.....	A	15	13	28	June 27	.....	4
Private.....	A. E. Bradley.....	B	15	13	28	Aug. 2	C. M. C.	.....
Private.....	G. D. Luby.....	C	15	13	28	July 19	.....	1
Private.....	H. A. Vanderpoel.....	A	15	13	28	Oct. 26	.....	1
Private.....	R. A. Hamilton.....	A	17	11	28	June 27	.....	2
Private.....	F. J. Kennedy.....	B	17	11	28	Oct. 26	.....	2
Private.....	E. F. Jones.....	B	11	16	27	July 19	.....	.....
Private.....	R. T. Webster.....	B	11	16	27	Nov. 1	C. M. C.	1
Private.....	C. H. Halenbeck.....	A	15	12	27	Oct. 26	.....	.....
Private.....	H. W. Robbins.....	B	15	12	27	June 4	.....	3
Private.....	C. B. Staats.....	B	15	12	27	Oct. 26	.....	3
Corporal.....	R. J. Wands.....	B	16	11	27	Oct. 26	.....	1
Private.....	J. Delamater.....	B	16	11	27	Oct. 26	.....	.....
First Sergt.....	C. W. Browne.....	B	17	10	27	June 4	.....	1
First Sergt.....	F. Easton.....	A	17	10	27	July 19	.....	1
Private.....	J. B. Hendrick.....	A	17	10	27	July 19	.....	1
Private.....	C. L. Krafft.....	A	18	9	27	Nov. 1	C. M. C.	.....
Private.....	C. Strevell.....	B	18	9	27	July 19	.....	1
Private.....	E. R. Clark.....	C	9	17	26	Aug. 4	.....	.....
Private.....	H. G. Stevens.....	B	12	14	26	June 4	.....	8
Private.....	W. H. Burton, Jr.....	B	13	13	26	July 19	.....	.....
Private.....	Paul Le Roux.....	C	13	13	26	Aug. 4	.....	.....
Corporal.....	J. C. McClelland.....	B	15	11	26	Oct. 26	.....	1
Private.....	J. Q. Van Alstyne.....	A	15	11	26	June 27	.....	.....
Private.....	C. J. Phisterer.....	B	16	10	26	July 19	.....	3
Private.....	J. C. Welch.....	B	16	10	26	June 4	.....	1
Private.....	G. A. Lindsay.....	B	17	9	26	June 19	.....	.....
Private.....	S. R. Perry.....	A	17	9	26	June 27	.....	1
Private.....	V. Coogan.....	C	18	8	26	July 19	.....	1
Private.....	F. H. Gates.....	D	18	8	26	June 11	.....	1
Private.....	James Long.....	B	18	8	26	Oct. 26	.....	2
Private.....	E. Ogden.....	C	18	8	26	Oct. 26	.....	.....
Private.....	W. C. Rose.....	A	19	7	26	June 27	.....	2
First Sergt.....	T. W. Nellis (Hos. Stew) ..	N.C.S	20	6	26	July 6	C. M. C.	.....
Q. M. Sergt.....	G. W. Reed.....	C	10	15	25	July 7	.....	3
Private.....	E. E. Irving.....	D	10	15	25	June 11	.....	.....
Private.....	J. D. Carroll.....	B	11	14	25	June 4	.....	.....
Private.....	C. H. Heck.....	B	12	13	25	July 19	.....	1
Corporal.....	Charles Massison.....	C	13	12	25	July 19	.....	4
Private.....	J. G. Apple.....	D	13	12	25	June 11	.....	3
Private.....	W. H. Butler.....	D	14	11	25	July 19	.....	1
Private.....	J. W. Carpenter.....	B	14	11	25	June 4	.....	.....
Corporal.....	William Coogan.....	C	15	10	25	July 19	.....	1
Private.....	A. A. Allen.....	B	15	10	25	June 4	.....	5
Private.....	G. H. Baxter.....	B	16	9	25	July 19	.....	.....
Private.....	F. H. Maguire.....	D	16	9	25	July 19	.....	.....
Private.....	D. Whitbeck.....	D	17	8	25	June 11	.....	.....
Private.....	J. H. Grube.....	N.C.S	18	7	25	July 19	.....	1

Total..... 96

THIRD SEPARATE COMPANY.

(Figure of merit 70.68.)

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Captain.....	Walter Scott.....	19	19	38	July 24	.....	7
Private.....	H. C. Merrill.....	19	18	37	July 24	.....	1
Private.....	De W. F. Slade.....	20	16	36	July 24	.....	3
Corporal.....	B. W. Hoyer.....	21	15	36	July 24	.....	8
Private.....	J. A. Halden.....	11	24	35	July 24	.....	1
First Lieut...	B. Mattice.....	19	16	35	Oct. 3	.....	2
Private.....	Charles Walcott.....	13	21	34	Oct. 3	.....	7
Private.....	L. A. Hopkins.....	15	19	34	July 24	.....	3
Private.....	G. W. Hodge.....	17	17	34	July 24	.....	1
Private.....	C. F. Mayham.....	18	16	35	July 24	.....	3
Sergeant.....	E. Merrill.....	15	18	33	July 24	.....	1
Private.....	N. J. Merrill.....	17	16	33	July 24	.....	2
Private.....	F. Nearing.....	18	15	33	July 24	.....	5
Private.....	V. Neer.....	19	14	33	Oct. 3	.....	1
Private.....	O. Erps.....	13	19	32	July 24	.....	1
Private.....	G. S. Olin.....	14	18	32	July 24	.....	7
Private.....	C. P. Hotaling.....	15	17	32	July 24	.....	1
Private.....	A. G. Palmer.....	16	16	32	July 24	.....	1
Private.....	H. A. Tucker.....	16	16	32	July 24	.....	7
Private.....	G. Chase.....	17	15	32	Oct. 3	.....	1
Second Lieut.	E. G. Bixby.....	20	12	32	July 24	.....	1
Private.....	Samuel Fearn.....	15	16	31	July 24	.....	1
Private.....	W. C. Merrill.....	15	16	31	July 24	.....	1
Private.....	W. H. Sickler.....	15	16	31	July 24	.....	1
Corporal.....	T. S. Barnes.....	16	15	31	July 24	.....	2
Private.....	H. Hoag.....	17	14	31	July 24	.....	1
Private.....	H. Patton.....	18	13	31	July 24	.....	1
Private.....	G. E. Bonck.....	20	11	31	July 24	.....	7
Private.....	M. E. Roarick.....	12	18	30	July 24	.....	1
Private.....	C. W. Southworth.....	18	12	30	Oct. 3	.....	3
First Sergt...	D. W. Miller.....	14	15	29	July 24	.....	1
Corporal.....	G. H. Richardson.....	18	11	29	July 24	.....	1
Private.....	E. E. Hill.....	12	16	28	July 24	.....	1
Private.....	S. H. Coney.....	13	15	28	Oct. 3	.....	1
Private.....	C. A. Boswell.....	14	14	28	July 24	.....	1
Private.....	W. H. Richards.....	15	13	28	July 24	.....	1
Private.....	E. A. Hayward.....	16	12	28	July 24	.....	7
Private.....	A. C. Bouton.....	18	10	28	July 24	.....	1
Sergeant.....	A. L. Kellogg.....	13	14	27	July 24	.....	1
Private.....	J. M. Hotaling.....	13	14	27	Oct. 3	.....	1
Private.....	D. Strong.....	14	13	27	July 24	.....	6
Private.....	S. H. Lane.....	16	11	27	Oct. 3	.....	1
Corporal.....	W. C. Gurney.....	13	13	26	July 24	.....	1
Corporal.....	H. M. Patton.....	13	13	26	July 24	.....	2
Private.....	William Fairchild.....	14	12	26	July 24	.....	1
Private.....	J. V. Sperbeck.....	14	12	26	Oct. 3	.....	1
Private.....	R. L. Whitman.....	14	12	26	Oct. 3	.....	1
Private.....	W. N. Banner.....	17	9	26	July 24	.....	1
Private.....	George Schmater.....	17	9	26	Oct. 3	.....	1
Private.....	C. E. Gurnsey.....	18	8	26	Oct. 3	.....	1
Private.....	C. A. Benjamin.....	13	12	25	July 24	.....	1
Private.....	J. S. Morrell.....	14	11	25	July 24	.....	1
Private.....	L. D. Slade.....	17	8	25	Oct. 3	.....	1
Private.....	J. F. Laraway.....	18	7	25	July 24	.....	1

Total 54

FOURTH SEPARATE COMPANY.

(Figure of merit..... 52.72.)

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	G. R. Stephens	19	18	37	June 19	.....	1
Corporal	T. A. Robinson	19	17	36	June 19	.....	2
Private	F. Shadeayne	20	15	35	June 19	.....	3
Corporal	C. F. Nugent	15	19	34	Oct. 15	.....	1
Captain	J. J. Pruyn	22	12	34	June 19	.....	13
Private	O. Olsen	17	16	33	June 19	.....	1
Private	J. Pagan, Jr.	19	13	32	June 19	.....	2
First Lieut.	W. H. McVicar	14	17	31	June 19	.....	6
Private	George White	18	13	31	Oct. 15	.....	2
Private	J. J. Dykes	16	14	30	June 19	.....	1
Private	Charles Gordon	17	13	30	June 19	.....	.....
Private	P. F. Sherman	17	13	30	June 19	.....	.....
Private	William McPherson	19	11	30	June 19	.....	1
Private	S. Williams	12	17	29	June 19	.....	.....
Private	A. W. Papps	13	16	29	June 19	.....	.....
Corporal	W. B. Thompson	18	11	29	June 19	.....	2
Private	E. W. Narr	10	18	28	Oct. 15	.....	2
Private	George Conklyn	12	16	28	June 19	.....	4
Sergeant	Thomas Oliver	13	15	28	June 19	.....	8
Private	A. Miller	13	15	28	Oct. 15	.....	.....
Private	F. S. Bunn	15	13	28	June 19	.....	1
Private	A. K. Shipman	16	12	28	June 19	.....	1
Private	John Frazier	18	10	28	June 19	.....	6
Sergeant	J. F. Christie	12	15	27	June 19	.....	3
Private	R. L. Miller	14	13	27	Oct. 15	.....	.....
Private	Thomas Frazier	15	12	27	June 19	.....	1
Private	P. Philp, Jr.	16	11	27	June 19	.....	.....
Private	J. Bachman	19	8	27	Oct. 15	.....	.....
Private	C. E. Mallinson	19	8	27	Oct. 15	.....	.....
Private	E. Wood	8	18	26	June 19	.....	1
Private	N. R. Van Houten	12	14	26	Oct. 15	.....	.....
Private	A. Land	17	9	26	Oct. 15	.....	.....
Private	S. A. Munn	17	9	26	June 19	.....	.....
Private	A. Suydam	18	8	26	June 19	.....	1
Private	W. S. Soeternon	10	15	25	June 19	.....	.....
Private	Jas. Frazier	15	10	25	June 19	.....	1
Private	M. S. Frazier	16	9	25	Oct. 15	.....	.....
Private	J. W. Nichols	16	9	25	June 19	.....	.....

Total 38

FIFTH SEPARATE COMPANY.

(Figure of merit..... 45.91.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Sergt.	H. Fairchild	20	20	40	Aug. 14	.....	9
Private	C. B. Cooper	18	16	34	Aug. 15	.....	1
Private	B. O. Ward	22	11	33	Oct. 3	.....	1
Private	J. M. Kadinsky	14	18	32	Aug. 15	.....	1
Private	G. W. Hulslander	19	13	32	Oct. 3	.....	1
Private	M. B. Pillotson	19	12	31	Aug. 14	.....	1
Private	G. R. Carter	15	15	30	Oct. 3	.....	1
Private	C. B. Hunt	15	14	29	Aug. 14	.....	1

FIFTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		300 yards.	500 yards.	Total.			
Private	E. Bush	10	18	28	Oct. 3	.....	.....
Second Lieut.	G. W. Dunn	14	14	28	Oct. 3	.....	1
Private	A. D. Acker	12	15	27	Oct. 3	.....	.....
Sergeant	L. A. Hunt	17	10	27	Aug. 15	.....	1
Sergeant	T. W. Moeler	15	15	30	Aug. 14	.....	2
Q. M. Sergt...	P. O'Brien	17	9	26	Oct. 3	.....	2
Private	J. W. Partington	17	9	26	Aug. 14	.....	.....
Private	Wm. Rice	19	7	26	Aug. 15	.....	.....
Private	S. L. Wilson	20	6	26	Aug. 15	.....	.....
Corporal	F. K. Hulslander	16	9	25	Oct. 3	.....	2
First Lieut...	J. H. Wells	18	7	25	Aug. 14	.....	2

Total..... 19

SIXTH SEPARATE COMPANY.

(Figure of merit..... 72.59.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal	T. W. Hislop*	22	24	46	Sept. 20	C. M. C.	5
Private	R. M. Townsend, Jr.*	22	21	43	Sept. 7	.....	6
First Sergt...	W. H. Stillman	19	18	37	Sept. 4	.....	11
Q. M. Sergt...	J. W. Harrington	18	18	36	Sept. 7	.....	5
Sergeant	W. B. Madden	16	19	35	Sept. 4	.....	4
Private	P. B. McCoy	19	16	35	Sept. 4	.....	9
Private	J. M. Sherrard	19	16	35	Sept. 7	.....	4
Private	L. H. Baker	15	19	34	Sept. 20	C. M. C. ....	.....
Private	M. D. Russell	20	14	34	Oct. 16	.....	4
Corporal	W. R. Bridges	13	20	33	Sept. 7	.....	5
Private	W. A. Thacher	17	16	33	Oct. 16	.....	.....
Second Lieut.	G. D. Smith	18	15	33	Sept. 7	.....	9
Private	J. D. Colby	18	15	33	Sept. 4	.....	1
Private	S. B. Smyth	18	15	33	Sept. 4	.....	4
Private	O. T. Warren	20	13	33	Oct. 16	.....	2
Private	J. Magill, Jr.	18	14	32	Oct. 16	.....	1
Private	J. C. Fursman	19	13	32	Oct. 16	.....	1
Private	J. G. Hall	21	11	32	Oct. 16	.....	.....
Private	J. P. Lyon	15	16	31	Oct. 6	.....	2
Private	M. H. French	17	14	31	Sept. 4	.....	.....
Corporal	C. J. Tappier	18	13	31	Sept. 4	.....	6
Private	E. Bussey, Jr.	19	12	31	Nov. 8	C. M. C.	2
Private	H. T. Whited	14	16	30	Sept. 20	C. M. C.	1
Corporal	F. E. Norton	15	15	30	Sept. 7	.....	7
Private	H. D. Schoonmaker	20	10	30	Sept. 4	.....	2
Private	R. A. Cairns	13	16	29	Sept. 6	C. M. C.	1
Private	W. T. Williamson	13	16	29	Sept. 7	.....	1
Private	Wm. Hagen	14	15	29	Sept. 20	C. M. C. ....	.....
Private	H. R. Mann	14	15	29	Sept. 7	.....	4
Private	L. Alexander	16	13	29	Sept. 6	C. M. C. ....	.....
Private	H. W. Frame	17	12	29	Sept. 4	.....	2
Private	T. S. Hoyt	17	12	29	Oct. 6	.....	10
Private	T. F. Maxwell	17	12	29	Sept. 4	.....	1
Private	H. F. Andrews	18	11	29	Oct. 16	.....	2
Private	S. P. McClellan	20	9	29	Sept. 4	.....	4
Private	J. A. Wells	21	8	29	Sept. 4	.....	4
Private	F. G. Brown, Jr.	12	16	28	Sept. 4	.....	.....
Corporal	J. C. Chapin	14	14	28	Oct. 14	C. M. C.	4
Private	G. H. Lee	14	14	28	Sept. 7	.....	5

SIXTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	E. R. Stephens	14	14	28	Sept. 7		
Private	J. A. Ide	16	12	28	Oct. 27	C. M. C.	2
Private	F. H. Knox	16	12	28	Sept. 20	C. M. C.	
Private	H. Benden	19	9	28	Oct. 16		1
Private	F. O. Stiles, Jr.	13	14	27	Sept. 4		6
Private	J. B. Wilkinson, Jr.	16	11	27	Sept. 4		1
Private	G. T. Bestle	17	10	27	Sept. 4		10
Private	E. P. Mann	19	8	27	Nov. 8	C. M. C.	
Private	G. B. Pattison	11	15	26	Sept. 7		6
Private	A. W. Harrington, Jr.	12	14	26	Sept. 4		3
Private	J. C. Kyd	12	14	26	Sept. 7		3
Private	C. Farnham	13	13	26	Oct. 16		5
Private	P. R. Morse	13	13	26	Sept. 7		5
Private	Thos. Vail	13	13	26	Sept. 4		4
Private	S. G. Curtis	14	12	26	Sept. 4		3
Private	G. W. Starkweather	14	12	26	Sept. 7		6
Corporal	G. L. French	15	11	26	Sept. 7		2
Private	F. W. Thomas	15	11	26	Sept. 7		1
Private	B. J. Tolhurst	15	11	26	Sept. 7		8
Private	M. T. Reynolds	16	10	26	Sept. 7		10
Sergeant	H. M. Caswell	17	9	26	Sept. 4		5
Private	C. S. Buntall	17	9	26	Sept. 4		1
Private	J. A. Lasher	21	5	26	Oct. 16		4
Private	J. G. Manning	11	14	25	Sept. 4		2
Private	H. P. Sherman	12	13	25	Sept. 7		2
Private	P. A. Sabbatton	13	12	25	Sept. 4		2
Private	E. S. Strait	15	10	25	Sept. 4		2
Private	J. Consalus, Jr.	16	9	25	Oct. 16		2
Private	A. M. Ide	18	7	25	Oct. 16	C. M. C.	
Private	J. N. Uline	19	6	25	Oct. 16		

Total..... 69

SEVENTH SEPARATE COMPANY.

(Figure of merit..... 75.61.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Second Lieut.	T. J. McNeil*	20	24	44	July 9		6
Private	F. W. Collins*	19	24	43	July 9		2
Q. M. Sergt.	W. H. Henry*	23	20	43	July 9		4
Private	J. E. Stephens*	18	24	42	July 9		2
Private	L. Bondrias, Jr.*	21	21	42	Sept. 25		2
Private	J. McGaffin	18	21	39	Sept. 25		1
Private	H. Hammond	20	19	39	Sept. 25		3
Private	Q. S. McNeil	20	19	39	July 9		2
Private	James Henry	17	21	38	Sept. 25		1
Corporal	J. H. Brierley	19	18	37	Sept. 25		4
Private	F. W. Steinmacher	19	17	36	July 9		1
First Sergt.	G. D. Jackson	19	16	35	July 9		2
Private	E. E. Van Heusen	19	16	35	July 9		3
Private	William Ross	17	17	34	July 9		2
Private	J. J. Steckner	17	17	34	Sept. 25		2
Sergeant	C. Beridewald, Jr.	19	15	34	July 9		4
Corporal	G. B. Griffin	19	15	34	Sept. 25		2
Private	R. B. Baker	20	14	34	Sept. 25		1
Private	P. F. Joyce	15	18	33	Sept. 25		2
Private	T. F. McDermott	17	16	33	July 9		1

SEVENTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	W. Snell	17	16	33	July 9		2
Private	Edw. Omilette	17	15	32	July 9		1
Private	T. L. Hillabrant	19	13	32	July 9		1
Private	R. B. Tobin	19	13	32	July 9		
Private	John Blakley	11	20	31	July 9		
Private	D. B. Mott	14	17	31	July 9		1
Private	E. E. Carter	17	14	31	Sept. 25		
Corporal	W. F. Stone	17	13	30	Sept. 25		3
Private	W. G. Burnett	18	12	30	Sept. 25		
Private	W. F. Scott	19	11	30	July 9		1
Private	H. Armstrong	14	15	29	July 9		1
First Lieut	T. C. Collin	15	14	29	July 9		5
Private	Wm. Fairchild	15	14	29	July 9		1
Private	J. C. Laing	16	13	29	July 9		2
Captain	P. G. Tymerson	17	12	29	July 9		5
Private	Jos. Kinton	13	15	28	July 9		1
Private	Jos. Kinton	13	15	28	July 9		1
Private	G. W. Peck	15	13	28	July 9		2
Private	Wm. Slates	15	13	28	Sept. 25		
Private	W. D. Boswell	16	12	28	Oct. 16		2
Private	W. H. Higgins	16	12	28	July 9		2
Private	Jas. Hume	18	10	28	Oct. 16		
Private	P. E. Johnson	18	10	28	July 9		
Corporal	C. Allen	15	12	27	July 9		2
Private	G. W. Dean	15	12	27	July 9		2
Private	J. W. Benzel	16	11	27	July 9		
Private	C. A. Conlin	16	11	27	Sept. 25		2
Private	L. J. Jeannin	16	11	27	July 9		2
First Lieut	J. H. Mitchell (Asst. Surg.)	17	10	27	July 9		1
Private	C. F. Poincel	17	10	27	July 9		
Private	C. J. Sibbald	17	10	27	July 9		1
Private	P. Smith	17	10	27	Oct. 16		1
Private	F. White	18	9	27	July 9		2
Private	G. Denison	13	13	26	Sept. 25		
Private	Wm. Muir	13	13	26	July 9		1
Private	H. R. Billings	14	12	26	July 9		1
Private	G. Higgins	14	12	26	July 9		
Private	E. G. Felix	15	11	26	July 9		1
Private	L. Gervais	16	10	26	Oct. 16		
Private	John Guild	16	10	26	July 9		1
Private	Geo. Gunther	12	13	25	July 9		
Private	F. Nusbaum	12	13	25	July 9		
Private	Edw. Pinder	13	12	25	July 9		1
Private	J. D. Lighthall	14	11	25	July 9		1
Private	C. W. Jones	15	10	25	July 9		
Private	D. Clark	16	9	25	July 9		2
Private	S. M. Bice	17	8	25	July 9		
Private	C. B. Mittall	18	7	25	July 9		1
Total					67		

NINTH SEPARATE COMPANY.
(Figure of merit..... 88.85.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Lieut	B. C. Senton (Asst. Surg.)*	21	24	45	Sept. 19		4
Private	C. T. Boardman*	22	23	45	Sept. 19		8
Captain	T. A. Patterson*	22	22	44	Sept. 19		10

NINTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qual- ifications.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Corporal.....	A. Dorval *	21	22	43	Sept. 19		10
Private.....	F. M. Greenough*	19	23	42	Sept. 19		5
Q. M. Sergt..	L. W. Finch*	21	21	42	Sept. 19		9
Sergeant.....	R. M. Adams.....	21	21	42	Sept. 19		6
Private.....	A. Either.....	18	23	41	Sept. 19		2
Private.....	J. C. Hopson.....	23	18	41	Sept. 19		5
Private.....	L. J. Bellegarde.....	19	20	39	Sept. 19		3
Private.....	Alex. McNeeley.....	19	20	39	Sept. 19		2
Private.....	W. E. Solis.....	20	18	38	Oct. 29		
Private.....	J. W. Sears.....	21	17	38	Sept. 19		
Second Lieut.	E. A. Greenough.....	16	22	37	July 24		5
Private.....	E. M. Allen.....	15	21	36	Oct. 29		4
Private.....	A. Prefontaine.....	16	20	36	Sept. 19		
Private.....	H. A. Barber.....	17	19	36	Sept. 19		5
Private.....	W. H. Pardo.....	21	15	36	Oct. 29		1
Private.....	A. G. Greenough.....	15	20	35	Sept. 19		2
Private.....	O. Preville.....	18	17	35	Oct. 19		
Private.....	A. H. Renois.....	15	19	34	Sept. 19		
Private.....	A. Crownse.....	17	17	34	Sept. 19		
Private.....	J. H. Waters.....	17	17	34	Sept. 19		2
Private.....	E. Rodd.....	18	16	34	Oct. 29		
Private.....	B. Townsend.....	18	16	34	Oct. 29		
Private.....	C. D. Waters.....	21	13	34	July 24		
Private.....	Edward Geffo.....	13	20	33	Sept. 19		2
Private.....	J. J. Greenough.....	17	16	33	Sept. 19		4
Private.....	Frank Pechet.....	17	16	33	Oct. 29		
Private.....	H. C. Waters.....	17	16	33	Oct. 29		
Private.....	A. Blanchard.....	20	13	33	Sept. 19		
Private.....	Nap. Reino.....	15	17	32	Oct. 29		
Private.....	H. A. Lester.....	16	16	32	Oct. 29		
Private.....	J. B. Pero.....	16	16	32	Sept. 19		
Private.....	J. H. Rodd.....	16	16	32	Oct. 29		
Private.....	H. H. Farrell.....	17	15	32	Sept. 19		1
Private.....	G. A. Mayrand.....	17	15	32	Oct. 29		
Private.....	J. W. Waters.....	17	15	32	Sept. 19		
Private.....	C. E. Manley.....	12	19	31	Oct. 29		
Private.....	J. F. Funnican.....	15	16	31	Sept. 19		
Private.....	J. E. Corbitt.....	16	15	31	Sept. 19		1
Private.....	W. J. Edmonds.....	19	12	31	Sept. 19		2
Private.....	W. J. Graves.....	11	19	30	Sept. 19		
Private.....	R. L. Coleman.....	14	16	30	Sept. 19		
Private.....	P. L. King.....	14	16	30	Sept. 19		
Private.....	E. Latham.....	12	17	29	Sept. 19		1
Corporal.....	C. M. Hotchkiss.....	13	16	29	Sept. 19		5
Private.....	Frank Renois.....	14	15	29	Sept. 19		
Private.....	A. Belleville.....	14	14	28	Oct. 29		
Private.....	G. G. Prefontaine.....	11	17	28	Sept. 19		
Private.....	William Demarest.....	15	13	28	Sept. 19		
Private.....	J. A. Gould.....	16	12	28	Oct. 29		
Private.....	A. Normandin.....	17	11	28	Oct. 29		
Private.....	J. H. O'Callaghan.....	21	7	28	Sept. 19		
Private.....	C. E. Waters.....	16	11	27	July 24		
Private.....	J. G. Wood.....	14	12	26	Sept. 19		
Private.....	L. J. Duso.....	16	10	26	Sept. 19		
Private.....	C. J. Vaumer.....	18	8	26	Sept. 19		
Sergeant.....	C. A. Jillson.....	15	10	25	Sept. 19		7
Private.....	J. G. Livingston.....	18	7	25	Sept. 19		

Total..... 60

TENTH SEPARATE COMPANY.

(Figure of merit..... 53.54.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Second Lieut.	T. T. Haviland*	20	23	43	Aug. 16	.....	4
Sergeant	J. S. Taylor	16	22	38	Oct. 23	.....	5
Private	W. E. Moore	14	22	36	Aug. 16	.....	3
Q. M. Sergt.	D. W. Jagger	19	16	35	Aug. 16	.....	3
Private	C. H. Buchanan	16	18	34	Oct. 23	.....	3
Corporal	C. B. Shaw, Jr	14	16	30	Aug. 16	.....	3
Corporal	L. Landphier	17	13	30	Aug. 16	.....	1
First Sergt.	H. Bond	16	13	29	Nov. 8	.....	10
Private	W. T. Hilton	14	14	28	Oct. 23	.....	.....
Corporal	L. W. Y. McCroskery	15	13	28	Aug. 16	.....	6
Private	James Herman	12	15	27	Oct. 23	.....	1
Private	W. A. Kidd	14	13	27	Oct. 23	.....	1
First Lieut.	W. J. Whited	18	9	27	Oct. 23	.....	2
Corporal	W. H. Hyndman	16	10	26	Aug. 16	.....	2
Private	A. L. Dunphy	19	7	26	Aug. 16	.....	2
Private	W. C. Gibb	13	12	25	Oct. 23	.....	1

Total 16

ELEVENTH SEPARATE COMPANY.

(Figure of merit..... 44.58.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	300 yards.	Total.			
Private	James Barker	20	14	34	Aug. 6	.....	1
Private	A. St. J. Sheppard	14	17	31	Aug. 6	.....	2
Private	J. A. Horton	15	16	31	Sept. 3	C. M. C.	1
Corporal	W. N. Wright	16	15	31	Aug. 6	.....	1
Second Lieut.	J. E. Tavener	18	13	31	Aug. 6	.....	5
Private	G. Van Pelt	18	12	30	Aug. 6	.....	3
Sergeant	C. W. Barker	14	15	29	Aug. 6	.....	2
Private	E. E. Bard	12	16	28	Aug. 6	.....	.....
Private	William Cronenberg	12	16	28	Aug. 6	.....	2
Corporal	F. Abel	14	13	27	Aug. 6	.....	1
Captain	I. A. Prossy	17	10	27	Aug. 6	.....	.....
Private	J. B. Hodge	12	14	26	Aug. 6	.....	.....
Private	G. B. Provost	12	14	26	Aug. 6	.....	.....
Private	R. W. Redmond	12	13	25	Aug. 6	.....	2
Private	C. W. Farrington	15	10	25	Aug. 6	.....	.....

Total 15

TWELFTH SEPARATE COMPANY.

(Figure of merit..... 41.26.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	W. J. Limerick*.....	19	23	42	Aug. 16	.....	1
Private.....	Geo. Lull*.....	20	22	42	Aug. 16	.....	1
Private.....	Chas. Quillman.....	18	15	33	Aug. 16	.....	.....
First Lieut.....	John Tallmadge.....	14	18	32	Sept. 25	.....	.....
Private.....	M. J. Conway.....	16	16	32	Sept. 25	.....	.....
Private.....	L. C. Owens.....	14	16	30	Aug. 16	.....	.....
Private.....	Jas. Stapleton.....	15	15	30	Aug. 16	.....	.....
Private.....	D. S. Becker.....	18	11	29	Aug. 16	.....	1
Private.....	L. DeCelle.....	15	13	28	Sept. 25	.....	.....
Second Lieut.....	A. W. Hill.....	18	10	28	Sept. 25	.....	1
Private.....	G. J. Chippendale.....	18	10	28	July 7	.....	2
Private.....	H. A. Fox.....	12	15	27	Aug. 16	.....	.....
Private.....	F. C. Wylie.....	12	15	27	Aug. 16	.....	.....
Private.....	C. Christmann.....	13	14	27	Aug. 16	.....	.....
Private.....	Geo. McKinney.....	14	13	27	Aug. 16	.....	1
Private.....	E. H. Phelps.....	14	13	27	Sept. 25	.....	.....
Private.....	P. Beanchea.....	15	12	27	Aug. 16	.....	.....
Private.....	E. L. Braman.....	15	12	27	Aug. 16	.....	.....
Private.....	Geo. Daugherty.....	20	7	27	Aug. 16	.....	.....
Private.....	L. Edinger.....	12	14	26	Aug. 16	.....	.....
Private.....	Jas. McCullen.....	15	11	26	Sept. 15	.....	.....
Private.....	W. L. Bulson.....	17	9	26	Aug. 16	.....	.....
Private.....	W. A. Vandercar.....	13	12	25	Sept. 25	.....	.....
Private.....	C. E. McLoughlin.....	16	9	25	Sept. 25	.....	.....

Total..... 24

FOURTEENTH SEPARATE COMPANY.

(Figure of merit..... 60.10.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain.....	J. G. Van Etten*.....	20	24	44	Sept. 11	C. M. C.....	4
Sergeant.....	J. S. Payntar.....	15	19	34	June 21	.....	5
Private.....	L. E. Van Etten.....	18	15	33	June 21	.....	2
First Lieut.....	C. W. Crispell.....	16	16	32	June 21	.....	4
Private.....	F. Dunwoody.....	16	16	32	Oct. 9	.....	.....
Private.....	John Turek.....	17	14	31	June 21	.....	3
Private.....	W. E. Hoag.....	20	11	31	June 21	.....	2
Private.....	Alexander Campbell.....	14	16	30	June 21	.....	.....
Private.....	D. L. Decker.....	15	15	30	Oct. 9	.....	.....
Private.....	C. M. King.....	16	14	30	Oct. 9	.....	3
Private.....	J. H. Burhans.....	20	10	30	June 21	.....	1
Corporal.....	R. F. Tompkins.....	9	20	29	June 21	.....	4
Private.....	S. D. Hood.....	14	15	29	June 21	.....	5
Private.....	R. A. Herdman.....	15	14	29	June 21	.....	1
Private.....	W. H. Hotaling.....	16	13	29	June 21	.....	2
Second Lieut.....	T. D. B. Freer.....	20	9	29	June 21	.....	1
Private.....	J. R. Kenyon.....	12	16	28	Oct. 9	.....	3
Q. M. Sergt.....	C. H. Van Gass Beck.....	13	15	28	Oct. 9	.....	3
Private.....	G. W. Lawton.....	14	14	28	June 21	.....	3
Private.....	John Deyo.....	15	13	28	June 21	.....	2
Private.....	W. J. De Witt.....	14	13	27	Oct. 9	.....	4

FOURTEENTH SEPARATE COMPANY—(Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	Charles Preston	14	13	27	Oct. 9		
Private	J. G. Westbrook	12	14	26	Oct. 9		2
Private	C. W. Dolson	15	11	26	Oct. 9		
Private	M. H. Brannigan	17	9	26	June 21		
Private	J. G. Mafera	13	8	26	Oct. 9		4
Private	Richard Dawe	19	7	26	June 21		1
Private	William Williams	19	7	26	June 21		1
Private	J. T. McBride	15	10	25	Oct. 9		
Private	E. Fowler	16	9	25	June 21		2

Total..... 30

FIFTEENTH SEPARATE COMPANY.

(Figure of merit..... 29.03.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	G. F. Allen	19	14	33	July 10		1
Q. M. Sergt	James Rose	15	15	30	July 10		1
Captain	B. Myers	14	12	26	July 10		10

Total..... 3

SIXTEENTH SEPARATE COMPANY.

(Figure of merit..... 52.03.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	G. E. Talley*	20	23	43	Oct. 18	C. M. C.	7
Private	H. Niklewicz*	19	23	42	Oct. 18	C. M. C.	4
Private	G. A. Englert	19	14	33	Oct. 18	C. M. C.	1
Private	R. Wengatz	18	14	32	June 22		
Private	H. J. Jones	19	13	32	Oct. 10		2
Private	W. Hook	20	11	31	June 22		
Private	George Egnor	15	15	30	Oct. 10		1
Private	J. A. Betts	20	10	30	June 22		
Private	B. Cummings	15	14	29	June 22		
Private	H. B. Wilcox	15	14	29	June 22		1
Private	J. F. Roe	16	12	28	June 22		1
Private	W. B. Lynan	12	15	27	June 22		
Sergeant	L. W. Richardson	15	12	27	Oct. 10		1
Sergeant	C. A. Spencer	12	14	26	Oct. 10		6
Private	C. A. Vroman	16	10	26	June 22		2
Private	A. L. King	17	9	26	Oct. 18		
First Sergt	Phil. Smith	21	5	26	Oct. 10	C. M. C.	6
Private	C. A. Owen	16	9	25	Oct. 10		

Total..... 18

EIGHTEENTH SEPARATE COMPANY.

(Figure of merit..... 76.29.)

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain.....	Jas. S. Garrett*	23	24	47	Sept. 18	.....	7
First Sergt....	W. B. Stevens*	23	24	47	Sept. 18	.....	6
Private.....	F. Davis*	23	23	46	Sept. 18	.....	3
First Lieut....	J. C. Leonard*	21	24	45	Sept. 18	.....	7
First Lieut....	F. B. Streeter (Asst. Surg.)*	22	23	45	Sept. 18	.....	1
Private.....	C. Hartman*	18	25	43	Sept. 18	.....	1
Sergeant.....	F. B. Brown*	18	24	42	Oct. 25	.....	4
Private.....	D. D. Austin	16	25	41	Oct. 25	.....	3
Private.....	H. D. Mead	18	22	40	Sept. 18	.....	.....
Sergeant.....	T. H. Winchell	18	22	40	Sept. 18	.....	.....
Sergeant.....	W. S. Smith	19	20	39	Oct. 25	.....	1
Corporal.....	W. H. White	16	22	38	Sept. 18	.....	4
Corporal.....	A. M. Lambert	19	19	38	Sept. 18	.....	4
Private.....	John Millard	21	17	38	Sept. 18	.....	5
Sergeant.....	C. M. Lent	15	22	37	Sept. 18	.....	9
Private.....	L. L. Chase	18	19	37	Sept. 18	.....	1
Private.....	L. B. Akins	19	18	37	Oct. 25	.....	.....
Private.....	W. R. Bullard	20	16	36	Oct. 25	.....	1
Private.....	J. H. Morgan	20	15	35	Oct. 25	.....	.....
Private.....	Jos. Murray	15	19	34	Sept. 18	.....	.....
Corporal.....	J. H. Conway	19	15	34	Oct. 25	.....	2
Second Lieut.	E. J. Gray	20	14	34	Oct. 25	.....	4
Q. M. Sergt...	S. C. Powers	15	18	33	Sept. 18	.....	1
Private.....	J. M. Patterson	19	14	33	Oct. 25	.....	3
Private.....	C. H. Farrar	14	18	32	Oct. 25	.....	.....
Private.....	G. A. Nichols	15	17	32	Oct. 25	.....	.....
Private.....	W. L. Davison	16	16	32	Sept. 18	.....	.....
Private.....	C. E. Clark	18	14	32	Oct. 25	.....	1
Private.....	F. D. Kirkham	20	12	32	Sept. 18	.....	1
Private.....	F. L. Brown	14	17	31	Oct. 25	.....	.....
Private.....	C. W. Skym	18	13	31	Sept. 18	.....	1
Corporal.....	S. W. Mott	14	16	30	Oct. 25	.....	.....
Sergeant.....	D. E. Fitzgerald	15	15	30	Oct. 25	.....	8
Private.....	C. C. Granger	15	15	30	Oct. 25	.....	.....
Private.....	J. E. H. Hurtubis	15	15	30	Oct. 25	.....	1
Private.....	E. McP. Ames	16	14	30	Sept. 18	.....	1
Private.....	J. P. Monty	16	14	30	Sept. 18	.....	.....
Corporal.....	L. L. Davis	15	14	29	Sept. 18	.....	1
Private.....	E. O. Sylvester	16	13	29	Oct. 25	.....	.....
Private.....	L. H. Geoman	17	12	29	Oct. 25	.....	.....
Private.....	J. C. Smith	17	12	29	Sept. 18	.....	5
Private.....	W. F. Winchell	17	12	29	Oct. 25	.....	.....
Private.....	J. H. Storey	16	11	27	Sept. 18	.....	1
Private.....	J. M. Kennedy	9	17	26	Oct. 25	.....	.....
Private.....	C. H. Stoddard	19	7	26	Sept. 28	.....	.....
Private.....	G. H. Rogers	21	4	25	Oct. 25	.....	4

Total..... 46

REPORT OF THE ADJUTANT-GENERAL.

NINETEENTH SEPARATE COMPANY.

(Figure of merit..... 43.88.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal.....	G. M. Slater	15	20	35	Aug. 20	.....	4
Private	E. Taylor	18	16	34	Nov. 8	.....	.....
Private	C. A. Bodenstein	22	13	35	Aug. 20	.....	.....
Captain.....	Wm. Haubennestel.....	16	16	32	Aug. 20	.....	.....
First Sergt.	J. G. L. Capron.....	16	16	32	Aug. 21	.....	11
Private	F. W. Wheeler.....	16	16	32	Aug. 20	.....	3
Corporal.....	M. J. Hennessy.....	15	16	31	Aug. 20	.....	5
First Lieut.	L. P. Haubennestel.....	18	13	31	Aug. 21	.....	5
Private	M. F. Springer.....	14	16	30	Aug. 21	.....	1
Private	G. Waechter.....	14	16	30	Aug. 20	.....	3
Private	F. J. Parks.....	16	12	28	Aug. 21	.....	2
Second Lieut.	M. L. Bentell	19	9	28	Nov. 8	.....	11
Private	J. M. Dillon	11	16	27	Nov. 8	.....	2
Private	G. M. Welkes	16	11	27	Aug. 20	.....	.....
Private	C. C. MacNeil	18	8	26	Aug. 20	.....	3
Private	Phil Bonesteel	13	12	25	Nov. 8	.....	.....
Private	E. J. Bryant	13	12	25	Nov. 8	.....	2
Private	E. H. Bell	15	10	25	Aug. 20	.....	.....
Sergeant	P. W. Hoffman	16	9	25	Aug. 21	.....	10
Private	F. H. Ferguson.....	16	9	25	Aug. 20	.....	.....
Sergeant.....	W. D. Bahret.....	17	8	25	Aug. 20	.....	7
Private.....	F. W. Curtis	17	8	25	Aug. 20	.....	5
Private.....	J. M. Coreoran	18	7	25	Aug. 21	.....	3

Total 23

TWENTIETH SEPARATE COMPANY.

(Figure of merit..... 79.13.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	300 yards.	Total.			
Private.....	D. H. Ogden *.....	22	25	47	Oct. 12	C. M. C.....	10
First Sergt.	C. H. Hitchcock *.....	23	23	46	Oct. 12	Third Brig.	5
Private	A. Bevier *.....	23	22	45	Oct. 12	Third Brig.	7
Private	C. E. Hinds *.....	21	23	44	Oct. 12	Third Brig.	4
Sergeant.....	W. W. Storr *.....	20	23	43	Oct. 12	C. M. C.....	5
Private	T. M. Congdon *.....	21	22	43	Oct. 12	Third Brig.	4
First Lieut.	D. S. Burr (Asst. Surg.) *.....	22	21	43	Oct. 12	Third Brig.	4
Private	T. L. Magrath.....	17	19	36	Oct. 25	.....	1
Corporal.....	C. W. Humphrey	17	18	35	July 27	.....	1
Private	J. Townsend.....	17	18	35	July 27	.....	3
Private	E. M. Roberts	20	15	35	July 27	.....	1
Private	J. P. Worthing	15	19	34	July 27	.....	12
Sergeant.....	H. P. Worthing.....	16	18	34	July 27	.....	3
Private	W. E. Tupper.....	16	18	34	Sept. 29	.....	1
Captain.....	H. C. Rogers.....	17	17	34	July 27	.....	4
Private.....	E. S. Hoag.....	18	16	34	July 27	.....	.....
Private	K. C. Winson	13	20	33	July 27	.....	8
Second Lieut.	F. D. Lyon	20	13	33	July 27	.....	.....
Private	J. R. Dimmick.....	17	15	32	July 27	.....	1
Private	J. S. Smith.....	14	17	31	July 27	.....	1
Private	F. A. Broemel	16	15	31	Sept. 29	.....	.....
Private.....	H. Acker.....	18	13	31	July 27	.....	2
Private.....	W. C. Allen.....	15	15	30	July 27	.....	.....
Private.....	E. E. Raasch.....	19	11	30	Oct. 25	.....	.....

TWENTIETH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	J. E. Scott	19	11	30	July 27	.....	3
Private.....	F. E. Van Alstyne	14	15	29	Oct. 25	.....	.....
First Lieut.	C. F. Tupper.....	15	14	29	July 27	.....	9
Corporal.....	G. C. Harris.....	15	14	29	July 27	.....	2
Private.....	C. Hoke.....	11	17	28	Sept. 29	.....	1
Private.....	E. G. Lantman	12	16	28	Sept. 29	.....	.....
Private.....	B. A. Read.....	13	15	28	July 27	.....	1
Private.....	A. G. Smith.....	14	14	28	July 27	.....	.....
Private.....	J. H. Meeker.....	15	13	28	July 27	.....	.....
Private.....	W. H. Seeley.....	15	13	28	July 27	.....	.....
Private.....	J. Murphy.....	17	11	28	Sept. 29	.....	.....
Private.....	C. L. Wood.....	18	10	28	Oct. 25	.....	.....
Corporal.....	F. W. Harris.....	20	8	28	July 27	.....	2
Private.....	F. F. Williams.....	13	14	27	Oct. 25	.....	1
Private.....	H. Gage.....	15	12	27	July 27	.....	.....
Private.....	H. B. Halstead.....	15	12	27	Sept. 29	.....	3
Corporal.....	G. O. Engelbrecht	16	11	27	July 27	.....	2
Private.....	M. P. Gorman.....	16	11	27	Oct. 25	.....	.....
Sergeant.....	F. A. L'Amorneux.....	17	10	27	July 27	.....	3
Private.....	B. A. Robinson.....	17	10	27	Oct. 25	.....	2
Private.....	F. G. Whittaker.....	17	10	27	July 27	.....	1
Private.....	R. W. Wright.....	18	9	27	July 27	.....	.....
Private.....	J. D. Denning.....	10	16	26	Sept. 29	.....	.....
Corporal.....	W. V. Parke.....	12	14	26	July 27	.....	1
Private.....	C. S. Bullis.....	12	14	26	Sept. 29	.....	.....
Private.....	G. W. Daniels.....	12	14	26	July 27	.....	4
Private.....	W. H. Whittemore.....	12	14	26	Sept. 29	.....	.....
Private.....	F. C. Williams.....	16	10	26	July 27	.....	2
Private.....	F. A. Campbell.....	14	11	25	July 27	.....	2
Private.....	H. C. Hughson.....	15	10	25	July 27	.....	.....
Private.....	F. Roberts.....	15	10	25	July 27	.....	.....
Private.....	A. N. Francoys.....	16	9	25	July 27	.....	.....
Private.....	J. D. Starr.....	16	9	25	Oct. 25	.....	1
Private.....	L. Taylor.....	16	9	25	July 27	.....	1
Private.....	A. J. Cummings.....	18	7	25	July 27	.....	1
Private.....	R. N. Bunk.....	20	5	25	July 27	.....	1

Total..... 60

TWENTY-FIRST SEPARATE COMPANY.

(Figure of merit..... 65.96.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	H. DeLong*.....	22	24	46	July 10	.....	.....
Corporal.....	E. W. Band*.....	20	22	42	July 10	.....	3
Corporal.....	W. H. Schutt.....	18	18	36	July 10	.....	1
Captain.....	J. H. Lloyd.....	19	17	36	July 10	.....	5
Private.....	John Simpson.....	18	17	35	July 10	.....	.....
Private.....	T. Karr.....	18	15	33	July 10	.....	2
Private.....	A. Carter.....	19	14	33	July 10	.....	.....
Private.....	F. E. Stapleton.....	14	18	32	July 10	.....	.....
Private.....	F. Erwin.....	16	16	32	July 10	.....	.....
Private.....	C. Fahl.....	16	16	32	July 10	.....	.....
Private.....	W. A. Slocum.....	16	16	32	July 10	.....	2
Private.....	G. Cooling.....	17	15	32	July 10	.....	.....
Private.....	F. B. Yearsley.....	18	14	32	July 10	.....	.....

TWENTY-FIRST SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	J. H. Pieters.....	15	16	31	July 10	.....	.....
Private.....	W. Mc Nab.....	18	13	31	July 10	.....	.....
Private.....	J. De Long.....	16	14	30	July 10	.....	2
Private.....	A. H. Colvin.....	17	13	30	July 10	.....	.....
Private.....	J. Crosby.....	17	13	30	July 10	.....	.....
Private.....	E. J. Filran.....	18	12	30	Sept. 28	.....	.....
Private.....	C. L. Miller.....	18	12	30	July 10	.....	.....
Private.....	H. Rising.....	12	17	29	July 10	.....	.....
Private.....	J. J. Munnig.....	13	16	29	Sept. 28	.....	.....
Sergeant.....	S. M. Johnson.....	15	14	29	July 10	.....	1
Private.....	L. D. Hunt.....	16	13	29	July 10	.....	2
Private.....	E. R. Caswell.....	17	12	29	July 10	.....	1
Private.....	F. Marston.....	17	12	29	Oct. 25	C. M. C.....	2
Q. M. Sergt.....	F. J. Schutt.....	18	11	29	July 10	.....	3
First Sergt.....	M. Sullivan.....	20	9	29	July 10	.....	4
Private.....	E. Cronin.....	14	14	28	July 10	.....	.....
Private.....	W. T. Rosekrans.....	14	14	28	July 10	.....	.....
Private.....	R. L. Conklyn.....	15	13	28	July 10	.....	3
Private.....	J. B. Stapleton.....	17	11	28	July 10	.....	.....
Private.....	W. L. Thompson.....	12	15	27	July 10	.....	1
Private.....	T. C. Ives.....	13	14	27	July 10	.....	1
Private.....	E. D. Britton.....	14	13	27	July 10	.....	.....
Private.....	C. W. Adams.....	15	12	27	July 10	.....	1
Private.....	F. A. Geer.....	17	10	27	July 10	.....	1
Private.....	H. A. Eddington.....	8	18	26	Sept. 28	.....	.....
Private.....	W. Thayer.....	10	16	26	Sept. 28	.....	1
Private.....	C. G. Apps.....	13	13	26	Oct. 25	C. M. C.....	.....
Private.....	W. H. Hannaman.....	13	13	26	Oct. 25	C. M. C.....	1
Private.....	F. G. Butterworth.....	14	12	26	July 10	.....	1
Private.....	G. B. Wright.....	15	11	26	Oct. 25	C. M. C.....	.....
Second Lieut.....	M. M. Dunsbaugh.....	16	10	26	July 10	.....	3
Private.....	F. R. Prendergast.....	16	10	26	July 10	.....	1
Private.....	W. J. Erwin.....	18	8	26	July 10	.....	2
Private.....	A. Da Bell.....	19	7	26	July 10	.....	.....
Private.....	S. D. Gibson.....	11	14	25	Oct. 25	C. M. C.....	1
Private.....	G. E. Cook.....	13	12	25	July 10	.....	1
Private.....	H. Evarts.....	13	12	25	July 10	.....	2
Private.....	L. Bebernitz.....	14	11	25	Oct. 25	C. M. C.....	.....
Private.....	M. Byrne.....	15	10	25	Sept. 28	.....	.....
Private.....	F. J. Schwarz.....	15	10	25	July 10	.....	.....
Private.....	T. Spratt.....	16	9	25	July 10	.....	1
Private.....	Wm. Best.....	18	7	25	Oct. 25	C. M. C.....	.....
Private.....	J. McB. Rice.....	19	6	25	Oct. 25	C. M. C.....	.....

Total 56

TWENTY-SECOND SEPARATE COMPANY.

(Figure of merit 57.25.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	W. A. Elkes.....	21	18	39	Oct. 8	.....	.....
Private.....	J. W. Lyman.....	17	20	37	Oct. 8	.....	1
Private.....	W. G. Groat.....	16	18	34	Oct. 8	.....	1
Corporal.....	J. N. Crocker, Jr.....	18	16	34	Oct. 8	.....	2
Private.....	A. D. Dowd.....	18	16	34	Oct. 18	.....	.....
Private.....	W. B. Milliman.....	18	15	33	Oct. 8	.....	.....
Corporal.....	C. H. Holmes.....	20	13	33	Oct. 24	.....	.....

TWENTY-SECOND SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain.....	R. C. McEwen.....	18	14	32	Oct. 8	.....	3
Private.....	L. R. Rich.....	19	13	32	Oct. 8	.....	3
Private.....	A. L. Churchill.....	16	15	31	Oct. 8	.....	3
Private.....	C. J. Fish.....	16	15	31	Oct. 24	.....	2
Q. M. Sergt....	Thos. Douglass.....	16	14	30	Oct. 24	.....	.....
Sergeant.....	R. Mingay, Jr.....	16	14	30	Oct. 22	.....	1
Corporal.....	A. C. Rich.....	12	17	29	Oct. 24	.....	2
First Lieut....	A. L. Hall.....	16	13	29	Oct. 24	.....	2
Second Lieut..	W. L. Rich.....	16	13	29	Oct. 8	.....	2
Private.....	A. H. Wilde.....	13	15	28	Oct. 18	.....	4
Private.....	D. W. Cowdery.....	14	14	28	Oct. 8	.....	1
Private.....	Thomas Roach.....	15	13	28	Oct. 8	.....	.....
Private.....	R. P. Holden.....	16	12	28	Oct. 22	.....	.....
Private.....	W. Q. Foster.....	17	11	28	Oct. 8	.....	.....
Sergeant.....	H. L. Waterbury.....	17	11	28	Oct. 8	.....	2
Sergeant.....	J. W. Lester.....	17	11	28	Oct. 24	.....	2
Private.....	C. C. Lester.....	17	11	28	Oct. 24	.....	.....
Private.....	W. Lester.....	17	11	28	Oct. 24	.....	.....
Private.....	R. C. Fonda.....	11	16	27	Oct. 8	.....	1
Private.....	E. R. Olmsted.....	14	13	27	Oct. 24	.....	.....
Private.....	J. C. Sargent.....	20	7	27	Oct. 24	.....	.....
Sergeant.....	J. H. Reagan.....	17	9	26	Oct. 24	.....	1
Private.....	W. S. Poler.....	18	8	26	Oct. 18	.....	5
Private.....	W. T. Clements.....	20	6	26	Oct. 18	.....	.....
Private.....	W. F. Town.....	14	11	25	Oct. 8	.....	.....

Total 32

TWENTY-THIRD SEPARATE COMPANY.

(Figure of merit..... 59.77.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private.....	D. W. Bugel*.....	21	21	42	Oct. 12	C. M. C.....	9
Corporal.....	R. C. Payne.....	20	21	41	Oct. 5	.....	4
First Lieut...	R. Reynolds.....	20	20	40	Oct. 4	.....	9
Private.....	M. Fitzgerald.....	17	19	36	Oct. 4	.....	.....
Sergeant.....	F. W. Macy.....	19	17	36	Oct. 4	.....	7
Corporal.....	G. E. Swift.....	13	22	35	Oct. 5	.....	4
Sergeant.....	M. Van Da Bogert.....	18	16	34	Oct. 5	.....	2
Private.....	H. S. Rivenburgh.....	17	16	33	Oct. 5	.....	2
Corporal.....	R. W. Evans.....	19	14	33	Oct. 4	.....	4
Private.....	E. H. Newcomb.....	19	14	33	Oct. 4	.....	1
Private.....	R. P. Van Denburgh.....	19	14	33	Oct. 4	.....	.....
Private.....	W. J. Van Vleck.....	19	14	33	Oct. 4	.....	2
Captain.....	C. F. T. Beale.....	14	18	32	Oct. 4	.....	1
Private.....	J. A. Morris.....	14	17	31	Oct. 4	.....	1
Private.....	N. H. Miller.....	13	17	30	Oct. 5	.....	.....
Private.....	J. K. Cosey.....	15	15	30	Oct. 5	.....	2
Private.....	C. S. Benedict.....	20	10	30	Oct. 4	.....	2
First Sergt....	J. T. B. Bogardus.....	17	12	29	Oct. 5	.....	3
Private.....	J. Phillips, Jr.....	18	11	29	Oct. 5	.....	1
Corporal.....	C. E. Wilcox.....	19	10	29	Oct. 4	.....	3
First Lieut...	C. E. Fritts (Asst. Surg.).....	14	14	28	Oct. 4	.....	9
Private.....	E. S. Nicholson.....	14	14	28	Oct. 4	.....	2
Private.....	L. R. Tilden.....	19	9	28	Oct. 4	.....	4
Private.....	J. C. Fiero.....	18	9	27	Oct. 4	.....	2

TWENTY-THIRD SEPARATE COMPANY — (*Concluded*).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	C. B. Macy	19	8	27	Oct.	4	5
Private	H. W. Macy	12	14	26	Oct.	5	...
Private	S. W. Morton	17	9	26	Oct.	5	...
Private	J. O. Shea	17	9	26	Oct.	4	...
Private	C. E. Barnard	21	5	26	Oct.	4	3
Private	M. R. Searing	21	5	26	Oct.	5	1
Sergeant	L. H. George	14	11	25	Oct.	4	8
Private	D. Rosenthal	14	11	25	Oct.	4	...
Private	L. H. Payne	15	10	25	Oct.	4	1
Corporal	C. L. Buckman	16	9	25	Oct.	5	2
Private	E. E. Smith	17	8	25	Oct.	4	...
Private	C. C. Tough	17	8	25	Oct.	4	1
Private	Nick. Klein	18	7	25	Oct.	4	1
Second Lieut.	Henry Waterman	22	3	25	Oct.	4	2

Total,..... 38

TWENTY-FOURTH SEPARATE COMPANY.

(No practice.)

TWENTY-SEVENTH SEPARATE COMPANY.

(Figure of merit..... 75.25.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Sergt....	S. G. Gregg	19	19	38	Sept. 21	...	4
Q. M. Sergt....	L. C. Smith	16	18	34	Nov. 1	...	2
Corporal	C. D. Bruce	19	15	34	Sept. 21	...	2
Private	C. G. Lord	16	17	33	Sept. 21	...	...
Private	W. P. Badger	17	16	33	Sept. 21	...	1
Private	W. L. Peterson	19	14	33	Sept. 21	...	1
Private	A. W. Grant	18	14	32	Sept. 21	...	1
Private	A. J. Miller	14	17	31	Nov. 1	...	1
Sergeant	F. C. Norris	19	12	31	Sept. 21	...	3
Private	Josiah Ide	15	15	30	Nov. 1	...	1
Private	F. G. Paddock	16	14	30	Nov. 1	...	...
First Lieut....	G. W. Crooks	17	13	30	Sept. 21	...	4
Private	C. W. Collins	17	13	30	Nov. 1	...	...
Private	F. G. Beatty	17	12	29	Sept. 21	...	...
Private	I. W. Chandler	18	11	29	Sept. 21	...	...
Private	O. S. Saunders	19	10	29	Nov. 1	...	1
Private	Thomas Barry	13	15	28	Nov. 1	...	1
Private	F. B. Dow	13	15	28	Nov. 1	...	1
Private	P. M. Hogue	15	13	28	Sept. 21	...	...
Corporal	R. M. York	19	9	28	Sept. 21	...	1
Corporal	C. F. Fury	14	13	27	Sept. 21	...	1
Corporal	G. E. Cooley	15	12	27	Nov. 1	...	4
Corporal	C. N. Roby	15	12	27	Nov. 1	...	3
Sergeant	J. A. Campbell	16	11	27	Sept. 21	...	2
Private	T. S. Carroll	18	9	27	Nov. 1	...	...
Private	H. L. Meighs	13	13	26	Nov. 1	...	...
Private	George Monagan	13	13	26	Sept. 21	...	2
Second Lieut.	F. D. Allen	14	12	26	Sept. 21	...	2
Private	F. J. Carr	14	12	26	Nov. 1	...	2

TWENTY-SEVENTH SEPARATE COMPANY — (*Concluded*).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	H. H. Creighton.....	15	11	26	Sept. 21	.....	1
Private	C. J. Ferris.....	15	11	26	Sept. 21	.....	1
Private.....	L. D. Munger.....	15	11	26	Nov. 1	.....	1
Private.....	F. Mulholland.....	15	11	26	Sept. 21	.....	.....
Private.....	C. E. Tracy.....	15	11	26	Sept. 21	.....	.....
Private.....	C. S. Hapgood.....	17	9	26	Sept. 21	.....	.....
Private.....	C. A. Hastings.....	18	8	26	Sept. 21	.....	.....
Private.....	J. W. Knapp.....	11	14	25	Sept. 21	.....	1
Private.....	A. J. Nicholson.....	13	12	25	Nov. 1	.....	.....
Private.....	C. W. Wilding.....	14	11	25	Sept. 21	.....	.....
Private.....	L. W. Hickok.....	15	10	25	Nov. 1	.....	.....
Private.....	H. H. Reynolds.....	15	10	25	Sept. 21	.....	.....
Corporal.....	S. F. Carpenter.....	17	8	25	Nov. 1	.....	.....
Private.....	W. J. Murphy.....	17	8	25	Sept. 21	.....	.....
Private.....	W. M. Myers.....	18	7	25	Nov. 1	.....	.....
Private.....	H. J. McDonald.....	19	6	25	Sept. 21	.....	.....

Total..... 45

TWENTY-EIGHTH SEPARATE COMPANY.

(No practice.)

THIRTY-FIRST SEPARATE COMPANY.

(Figure of merit..... 19.39.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualification.
		200 yards.	500 yards.	Total.			
Private	J. W. Johnson.....	20	19	39	Sept. 27	.....	1
Captain.....	A. J. Budlong.....	18	20	38	Sept. 29	.....	2
Private.....	G. P. Rasbach.....	19	19	38	Sept. 29	.....	4
First Lieut...	D. M. Dodge.....	23	14	37	Sept. 27	.....	.....
First Sergt...	F. H. Sayles.....	18	18	36	Sept. 22	.....	3
Private.....	C. B. Morris.....	17	18	35	Sept. 27	.....	.....
Second Lieut.	J. M. Bellinger.....	14	20	34	Sept. 22	.....	4
Sergeant.....	J. W. Gleed.....	20	14	34	Sept. 24	.....	1
Private.....	R. R. Wood.....	13	20	33	Sept. 27	.....	.....
Private.....	W. Whitfield.....	19	14	33	Sept. 29	.....	3
Private.....	C. P. Warburton.....	14	18	32	Oct. 4	.....	.....
Private.....	O. Horton.....	16	16	32	Sept. 22	.....	4
Sergeant.....	C. J. Thrall.....	13	18	31	Sept. 22	.....	3
Private.....	W. Eddy.....	15	15	30	Sept. 24	.....	1
Private.....	T. Coleman.....	22	6	28	Oct. 11	.....	1
Private.....	F. J. Murphy.....	17	10	27	Sept. 24	.....	.....
Corporal.....	C. E. Basley.....	13	13	26	Sept. 24	.....	2
Private.....	E. A. Hiltz.....	13	13	26	Oct. 11	.....	.....
Private.....	Jos. Cole.....	15	10	25	Sept. 27	.....	1
Corporal.....	J. Derrell.....	16	9	25	Sept. 22	.....	2
Private.....	F. Arthur.....	16	9	25	Sept. 22	.....	1

Total..... 21

THIRTY-SECOND SEPARATE COMPANY.

(Figure of merit..... 71.21.)

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Private	H. R. Palmer *	23	21	44	Oct. 3		2
Sergeant	B. Willis *	21	21	42	Oct. 3		1
Corporal	F. A. Rich *	23	19	42	Oct. 3		2
Private	Theodore Russell	20	19	39	Oct. 19		1
First Sergt.	Y. Van Evera	21	18	39	Oct. 3		2
Corporal	E. C. Byers	22	16	38	Oct. 19		2
Private	W. H. Link	20	17	37	Oct. 3		1
Private	F. C. Pitney	20	17	37	Oct. 19		1
Private	H. Corbin	21	16	37	Oct. 3		2
Private	C. W. Bates	19	17	36	Oct. 19		1
Private	W. F. Breese	18	17	35	Oct. 3		
Private	William Paul	19	16	35	Oct. 19		1
Private	F. G. Sebolt	21	14	35	Oct. 19		1
Private	W. E. Bristol	14	20	34	Oct. 3		
Private	Charles Close	17	16	33	Oct. 3		1
Private	W. P. Haynes	20	13	33	Oct. 3		
First Lieut.	L. Ashton (Asst. Surg.)	16	16	32	Oct. 3		
Private	C. A. Folland	16	16	32	Oct. 19		2
Private	B. W. Worden	17	15	32	Oct. 19		
Private	Fred Kincaid	19	13	32	Oct. 19		
Private	J. W. Sipperly	19	13	32	Oct. 19		1
Private	Edw. Gill	21	11	32	Oct. 3		1
Private	E. Freemyer	15	16	31	Oct. 19		
Corporal	E. S. Thomas	17	14	31	Oct. 3		1
Private	J. W. Mead	18	13	31	Oct. 19		1
Private	C. C. Milliken	19	12	31	Oct. 19		2
Private	W. I. Haley	20	11	31	Oct. 3		2
Private	T. C. Mitchell	21	10	31	Oct. 19		1
First Lieut.	F. L. Stephens	15	15	30	Oct. 3		1
Private	W. T. Montgomery	16	14	30	Oct. 19		1
Private	W. J. Rafter	16	14	30	Oct. 19		
Private	C. R. Gifford	18	12	30	Oct. 3		1
Private	S. Locke	19	11	30	Oct. 19		
Captain	C. E. Eddy	20	10	30	Oct. 19		3
Corporal	J. J. Dening	20	10	30	Oct. 3		2
Private	C. E. Beattie	17	12	29	Oct. 3		2
Private	G. L. Freemyer	17	12	29	Oct. 3		2
Private	W. J. Haynes	17	12	29	Oct. 3		
Private	G. W. Van Hyrning	17	12	29	Oct. 19		
Private	J. W. Martin	19	10	29	Oct. 19		2
Private	F. W. Gifford	18	10	28	Oct. 3		1
Private	A. McLean	19	9	28	Oct. 19		1
Private	F. S. Lansing	19	9	28	Oct. 3		
Private	W. R. Smith	19	9	28	Oct. 19		1
Private	F. T. Sibley	20	8	28	Oct. 19		1
Private	C. J. Sterrett	15	12	27	Oct. 19		1
Private	R. W. Fisk	16	11	27	Oct. 3		
Private	H. Freemyer	17	10	27	Oct. 3		1
Private	T. W. Keceer	17	10	27	Oct. 3		
Private	R. J. Redfield	17	10	27	Oct. 19		1
Private	G. B. Gifford	18	9	27	Oct. 3		1
Private	Edw. Rafter	18	9	27	Oct. 3		2
Private	H. W. Rextrew	19	8	27	Oct. 19		
Q. M. Sergt.	J. M. Clauson	20	7	27	Oct. 19		1
Sergeant	Samuel Paul	20	7	27	Oct. 19		1
Private	N. F. Bigart	14	12	26	Oct. 3		1
Private	James Bryant	14	12	26	Oct. 3		2
Private	Charles Bush	15	11	26	Oct. 3		
Private	G. M. Berie	16	10	26	Oct. 19		
Private	W. W. Lorigon	16	10	26	Oct. 3		
Private	G. McDowell	18	8	26	Oct. 19		
Private	W. H. Keeley	19	7	26	Oct. 3		1
Private	B. W. Sugden	19	7	26	Oct. 3		1
Private	A. Atwood	15	10	25	Oct. 3		
Private	P. F. Barber	15	10	25	Oct. 3		1
Second Lieut.	G. W. Walden	21	4	25	Oct. 19		2
Sergeant	R. L. Perry	22	3	25	Oct. 19		2

Total..... 67

THIRTY-THIRD SEPARATE COMPANY.

(Figure of merit..... 70.66.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Sergt ...	De McLean*	23	22	45	Sept. 20	.....	6
Sergeant	C. W. Beers*	22	22	44	Sept. 20	.....	7
Sergeant	T. A. Pine*	20	22	42	Sept. 20	.....	7
Captain	M. W. Marvin	19	22	41	Sept. 20	.....	8
Private	E. E. Robinson	20	21	41	July 25	.....	3
Q. M. Sergt...	George Patchin	20	19	39	Sept. 20	.....	6
Private	R. E. Love	18	19	37	Sept. 20	.....	...
Private	D. T. Borden	20	17	37	July 25	.....	3
Sergeant	F. E. Marvin	15	20	35	Sept. 20	.....	3
Private	J. W. St. John	19	16	35	July 25	.....	1
Corporal	W. L. France	20	15	35	July 25	.....	7
Private	L. C. Rosa	20	15	35	Sept. 20	.....	2
Private	W. H. McCall	16	17	33	July 25	.....	4
Private	F. Purdy	16	17	33	Sept. 20	.....	5
Private	J. C. Martin	18	15	33	Sept. 20	.....	1
Private	H. E. North	18	15	33	July 25	.....	...
Private	H. C. Pine	18	15	33	Sept. 20	.....	1
Corporal	C. W. Smith	19	14	33	Sept. 20	.....	4
Private	W. S. Whitcomb	19	14	33	July 25	.....	2
Private	Henry Seeley	13	19	32	Sept. 20	.....	...
Private	F. A. Pine	18	14	32	Sept. 20	.....	1
Private	W. A. White	15	16	31	Sept. 20	.....	...
Private	E. H. Hanford	16	15	31	Sept. 20	.....	2
Private	S. L. Twist	16	15	31	Sept. 20	.....	1
Corporal	N. S. Rosa	18	13	31	Sept. 20	.....	3
Private	F. P. Wakeman	18	13	31	July 25	.....	3
Corporal	D. W. Benedict	19	12	31	Sept. 20	.....	5
Private	R. J. Hodge	17	13	30	Sept. 20	.....	...
Private	O. W. Fox	20	10	30	July 25	.....	4
Private	F. G. Howland	15	14	29	July 25	.....	4
Private	J. H. McCall	17	12	29	July 25	.....	1
Private	E. Seeley	18	11	29	July 25	.....	...
First Lieut ...	H. B. Moremus	19	10	29	Sept. 20	.....	5
Private	B. A. Pregurtha	18	10	28	Sept. 20	.....	...
Private	John Pregurtha	17	10	27	Sept. 20	.....	...
Private	J. J. Rosa	14	12	26	Sept. 20	.....	2
Private	W. K. Miller	15	11	26	Sept. 20	.....	...
Private	G. W. Vandervort	15	11	26	Sept. 20	.....	...
Private	Louis Beardslee	16	10	26	Sept. 20	.....	3
Private	C. N. Vandervort	12	13	25	Sept. 20	.....	2
Private	W. B. Woodburn	13	12	25	Sept. 20	.....	...
Private	C. E. Beers	14	11	25	Sept. 20	.....	1

Total..... 42

THIRTY-FIFTH SEPARATE COMPANY.

(Figure of merit..... 58.63.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Sergeant	A. D. Stetson	20	17	37	Aug. 10	.....	1
Private	I. L. Wells	18	18	36	Aug. 10	.....	1
Private	J. A. Overton	15	20	35	Aug. 10	.....	...
Private	H. A. Lord	17	18	35	Oct. 26	.....	1
Private	G. Brash	19	16	35	Oct. 26	.....	...
Private	W. H. Godden	16	18	34	Oct. 26	.....	1
Private	M. T. Panguette	18	16	34	Aug. 10	.....	1

THIRTY-FIFTH SEPARATE COMPANY — (*Concluded*).

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Corporal.....	W. J. Baillie.....	22	12	34	Oct. 26		
Captain.....	H. Holland.....	16	17	33	Aug. 10		1
First Lieut...	J. W. Benton (Asst. Surg.).....	19	14	33	Aug. 10		1
Private.....	J. B. Tuck.....	18	14	32	Aug. 10		1
Private.....	A. Oswell.....	22	10	32	Oct. 26		
Private.....	W. T. Tuck.....	15	16	31	Aug. 10		
Private.....	W. H. Proctor.....	17	14	31	Oct. 26		2
Private.....	Dan Sweeney.....	19	12	31	Aug. 10		
Sergeant.....	M. Borard.....	20	11	31	Oct. 26		
Private.....	M. K. McDougall.....	16	14	30	Oct. 26		
Private.....	J. E. McKee.....	18	12	30	Oct. 26		
Private.....	F. A. Thompson.....	19	11	30	Oct. 26		1
Private.....	J. F. Aikens.....	20	10	30	Oct. 26		
Private.....	H. S. Stilwell.....	22	8	30	Aug. 10		
Private.....	G. Earl.....	17	12	29	Oct. 26		1
Private.....	G. T. Briggs.....	14	14	28	Oct. 26		
Private.....	S. W. Baillie.....	17	11	28	Oct. 26		
Private.....	E. J. Ives.....	18	10	28	Oct. 26		
Private.....	J. J. Senvie.....	10	17	27	Aug. 10		1
Private.....	A. J. Colnon.....	16	11	27	Aug. 10		
Second Lieut.	D. B. Lucey.....	13	13	26	Aug. 10		1
Private.....	W. J. Lord.....	15	11	26	Oct. 26		
Private.....	J. M. Irwin.....	16	10	26	Oct. 26		
Private.....	C. N. Lewis.....	17	9	26	Oct. 26		1
Private.....	Edw. McVean.....	17	9	26	Aug. 10		2
Private.....	E. L. Facknell.....	13	12	25	Aug. 10		
Sergeant.....	E. A. Brown.....	14	11	25	Aug. 10		1
Private.....	C. M. McRoberts.....	14	11	25	Oct. 26		
Private.....	C. G. Porteous.....	17	8	25	Oct. 26		
Private.....	W. J. Furness.....	19	6	25	Aug. 10		1
Private.....	C. S. Hubbard.....	19	6	25	Oct. 26		
Total.....		38					

Total..... 38

THIRTY-SIXTH SEPARATE COMPANY.

(Figure of merit 39.91.)

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Private.....	S. Wemple.....	20	20	40	Aug. 20		
First Lieut....	W. T. Clute (Asst. Surg.).....	21	19	40	Aug. 20		2
Private.....	John Bath.....	18	21	39	Aug. 20		1
Private.....	P. Cook.....	20	19	39	Aug. 20		2
Private.....	W. Veeder.....	19	18	37	Aug. 20		1
Private.....	J. McC. Paige.....	16	20	36	Aug. 20		5
Private.....	S. S. Vandenberg.....	15	18	33	Aug. 20		
Second Lieut.	J. E. Swanker.....	17	15	32	Aug. 20		1
Private.....	Sam. Leno.....	16	15	31	Aug. 20		
Private.....	N. Swart.....	15	15	30	Aug. 20		1
Private.....	Geo. Gould.....	16	14	30	Aug. 20		
Q. M. Sergt....	W. H. Gray.....	18	12	30	Aug. 20		2
Sergeant.....	Wm. Vrooman.....	18	11	29	Aug. 20		1
First Lieut....	Jas. F. White.....	12	16	28	Aug. 20		4
Sergeant.....	J. C. Kolz.....	14	13	27	Aug. 20		1
Private.....	John Harbinson.....	19	8	27	Aug. 20		
Private.....	Alex. Gifford.....	18	8	26	Aug. 20		
First Sergt....	J. H. Smith.....	9	16	25	Aug. 20		4
Corporal.....	M. Johnson.....	15	10	25	Aug. 10		1
Total.....		19					

Total..... 19

THIRTY-SEVENTH SEPARATE COMPANY.

(Figure of merit 26.09.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Sergeant	F. Bauder	16	23	39	Aug. 21	.....	.....
Private	F. P. Reeves	21	14	35	Aug. 21	.....	1
Private	W. Briggs	20	14	34	Aug. 21	.....	1
Corporal	M. Carroll	16	15	31	Aug. 21	.....	.....
Private	A. G. Veeder	18	13	31	Aug. 21	.....	1
Private	E. F. Garling	16	14	30	Aug. 21	.....	1
Private	G. W. Van Vranken	17	13	30	Aug. 21	.....	.....
Private	A. Edwards	16	13	29	Aug. 21	.....	.....
Private	L. Lockwood	11	17	28	Aug. 21	.....	.....
Private	H. Fowler	13	15	28	Aug. 21	.....	.....
Private	M. W. Rosa	14	14	28	Aug. 21	.....	1
Private	E. W. Veeder	19	9	28	Aug. 21	.....	1
Private	W. Rector, Jr.	14	12	26	Aug. 21	.....	.....
Corporal	Edw. Hagen	12	13	25	Aug. 21	.....	1
Private	H. B. Duryee	12	13	25	Aug. 21	.....	.....
Private	H. S. Estecourt	14	11	25	Aug. 21	.....	2
Private	B. W. Keigher	14	11	25	Aug. 21	.....	.....
Private	W. V. Steers	14	11	25	Aug. 21	.....	.....
Private	E. J. Jeffries	16	9	25	Aug. 21	.....	2
Private	G. B. Poole	16	9	25	Aug. 21	.....	.....
Private	W. E. Bradt	17	8	25	Aug. 21	.....	.....
First Sergt	G. E. Tabor	21	4	25	Aug. 21	.....	.....

Total 22.

THIRTY-NINTH SEPARATE COMPANY.

(Figure of merit 79.17.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Sergeant	J. S. Boyce *	21	23	44	Aug. 8	.....	7
Corporal	J. N. Carlisle *	21	22	43	Aug. 8	.....	3
Private	W. W. Richey *	21	22	43	Oct. 17	.....	6
Sergeant	J. A. McConnell *	20	22	42	Aug. 8	.....	5
First Sergt	W. R. Timmerman	19	22	41	Aug. 8	.....	9
Sergeant	C. R. Murray	16	23	39	Aug. 8	.....	6
First Lieut	M. L. Smith (Asst. Surg.)	19	20	39	Aug. 8	.....	4
Corporal	J. C. Ayres	19	20	39	Aug. 8	.....	4
Private	P. J. Baker	19	19	38	Aug. 8	.....	4
Private	C. J. Quail	16	21	37	Aug. 8	.....	.....
Private	C. Fischer	15	21	36	Aug. 8	.....	.....
Private	F. N. Lamont	17	19	36	Aug. 8	.....	1
Private	C. G. Stevens	18	18	36	Aug. 8	.....	1
Private	J. M. Cadwell	19	17	36	Oct. 17	.....	3
Private	N. H. Moriarty	19	17	36	Oct. 17	.....	1
Private	W. S. Burt	16	19	35	Aug. 8	.....	1
Private	J. S. Baird	18	17	35	Oct. 17	.....	1
Private	F. F. Sargent	16	18	34	Aug. 8	.....	1
Private	F. C. Delhauer	18	16	34	Aug. 8	.....	.....
Private	E. H. Murray	20	14	34	Oct. 17	.....	3
Private	H. W. Taggart	20	14	34	Aug. 8	.....	.....
Sergeant	S. Child	21	13	34	Oct. 17	.....	3
Private	J. F. De Marse	18	15	33	Oct. 17	.....	.....
Private	C. E. Ehrlicher	20	13	33	Oct. 17	.....	3
Private	J. W. Taggart	16	16	32	Aug. 8	.....	5

THIRTY-NINTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	F. F. York	18	14	32	Aug. 8	.....	3
Private	G. W. Chadwick	19	13	32	Aug. 8	.....	2
Private	A. L. Keenan	19	13	32	Oct. 17	.....	3
Private	E. R. Hildreth	16	15	31	Aug. 8	.....	1
Private	C. L. Nimocks	17	14	31	Oct. 17	.....	.....
Private	C. E. Jones	18	13	31	Aug. 8	.....	3
Private	S. D. Rider	14	16	30	Aug. 8	.....	1
Private	J. T. Raplee	18	12	30	Aug. 8	.....	3
Private	E. G. Herrick	11	18	29	Aug. 8	.....	1
Private	J. N. Noble	13	16	29	Aug. 8	.....	3
Q. M. Sergt.	E. C. McNamee	18	11	29	Oct. 17	.....	3
Private	F. G. Taylor	13	15	28	Aug. 8	.....	3
Private	C. Inglehart	14	14	28	Oct. 17	.....	1
Private	W. B. Ball	15	13	28	Aug. 8	.....	2
Private	G. B. Chase	15	13	28	Oct. 17	.....	.....
Private	L. L. Hine	16	12	28	Oct. 17	.....	.....
Private	E. R. Taylor	16	12	28	Aug. 8	.....	3
Private	R. E. Berner	17	11	28	Oct. 17	.....	.....
Private	S. E. Hunting	18	10	28	Oct. 17	.....	.....
Private	A. O. Shaw	16	11	27	Oct. 17	.....	1
Private	J. H. Spratt	16	11	27	Aug. 8	.....	3
Private	S. A. Upham	16	11	27	Oct. 17	.....	.....
Private	H. C. Whitney	16	11	27	Oct. 17	.....	1
Private	B. A. Field	17	10	27	Oct. 17	.....	1
Private	F. A. Moore	18	9	27	Oct. 17	.....	.....
Private	F. W. Streeter	19	8	27	Aug. 8	.....	2
Private	H. N. Butterworth	20	7	27	Oct. 17	.....	.....
Private	G. R. Clare	15	11	26	Oct. 17	.....	1
Private	W. B. Carlisle	16	10	26	Aug. 8	.....	3
Private	F. W. Hubbard	16	10	26	Oct. 17	.....	.....
Private	J. W. Loan	16	10	26	Aug. 8	.....	1
Private	L. J. Davis	17	9	26	Aug. 8	.....	1
Private	F. E. Avery	18	8	26	Oct. 17	.....	2
Private	W. J. Felt	18	8	26	Oct. 17	.....	1
Private	C. F. Baldwin	13	12	25	Aug. 8	.....	2

Total..... 60

FORTY-FOURTH SEPARATE COMPANY.

(No practice.)

SIXTH BATTERY.

(Figure of merit..... 24.27.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Sergt ...	A. J. Bush	18	22	40	July 26	.....	1
Captain	L. L. Olmsted	20	19	39	July 26	.....	1
Private	S. C. Yager	16	21	37	July 26	.....	.....
Private	A. Breckenridge	16	18	34	July 26	.....	.....
Private	L. F. Pitcher	18	16	34	July 26	.....	1
Private	A. B. River	16	17	33	July 26	.....	1
Sergeant	E. C. Belcher	17	16	33	July 26	.....	.....
Private	J. F. Ferdon	13	17	30	July 26	.....	.....
Sergeant	J. E. Dunning	19	11	30	July 26	.....	1

SIXTH BATTERY— (*Concluded*).

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Private.....	F. E. Vosburgh.....	11	18	29	July 26	.....	.....
Private.....	F. Colesten.....	15	14	29	July 26	.....	1
Private.....	Chas. Stiles.....	16	13	29	July 26	.....	.....
Private.....	J. H. Barnes.....	17	12	29	July 26	.....	1
Private.....	B. Tompkins.....	20	9	29	July 26	.....	.....
Private.....	C. E. Potter.....	14	14	28	July 26	.....	1
Private.....	C. B. Vosburg.....	14	14	28	July 26	.....	.....
Corporal.....	A. A. Ainsworth.....	16	12	28	July 26	.....	.....
Private.....	G. F. Ogden.....	13	14	27	July 26	.....	.....
Private.....	R. A. Thompson.....	13	14	27	July 26	.....	.....
Private.....	J. J. Conley.....	14	13	27	July 26	.....	.....
Sergeant.....	S. Smithurst.....	15	11	26	July 26	.....	.....
Private.....	H. Gilbert.....	13	12	25	July 26	.....	.....
Private.....	F. McClure.....	15	10	25	July 26	.....	.....
Private.....	F. Smith.....	15	10	25	July 26	.....	.....

Total..... 24

FOURTH BRIGADE.

(Figure of merit..... 55.19.)

GENERAL AND STAFF.

(Figure of merit..... 82.00.)

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Major.....	E. J. Weeks.....	17	18	35	July 21	C. M. C.....	.....
Major.....	E. Hayes.....	18	13	31	Aug. 24	.....	4
Major.....	E. S. Warren.....	17	13	30	Oct. 27	.....	6
Lieut.-Col....	Chas. Clifton.....	17	12	29	Aug. 24	.....	6
Major.....	A. H. G. Hardwicke.....	20	9	29	Oct. 27	.....	2
Major.....	R. Park.....	18	10	28	July 21	C. M. C.....	4
Captain.....	C. T. Wilson.....	12	13	25	Oct. 27	.....	.....

Total..... 7

SIXTY-FIFTH REGIMENT.

(Figure of merit..... 58.56.)

Rank.	NAME.	Company.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
			200 yards.	500 yards.	Total.			
First Lieut...	John Rateliff*.....	D	22	22	44	Aug. 15	.....	2
First Lieut...	Phil Fogarty*.....	H	20	23	43	Aug. 8	.....	6
Captain.....	J. M. Swanson*.....	D	22	21	43	Aug. 15	.....	6

SIXTY-FIFTH REGIMENT—(Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. A. Ward *	I	22	21	43	Sept. 22	C. M. C.	2
Second Lieut.	E. A. Smith*	F	19	23	42	Sept. 25	C. M. C.	7
First Sergt	Robert Wahlstedt*	D	20	22	42	Aug. 15		2
Corporal	J. G. Anderson*	D	21	21	42	Aug. 15		
Private	R. E. Emblidge	F	18	23	41	Sept. 22	C. M. C.	5
Private	M. Wasser	D	20	21	41	Aug. 15		9
Private	A. Schallan	H	15	22	37	Aug. 18		
Private	Henry Bromley	F	17	20	37	Aug. 18		1
Private	C. A. Anderson, No. 1.	D	18	19	37	Aug. 15		2
Private	J. W. Croft	A	18	19	37	Aug. 8		
Private	C. Haas	B	18	19	37	Aug. 18		1
Sergeant	James Buddenborg	B	19	18	37	Aug. 15		3
Private	A. J. Madell	H	15	21	36	Aug. 29		
First Lieut	L. Northrup	G	16	20	36	Aug. 29		
Private	Jos. Jerge, Jr.	D	17	19	36	Aug. 18		
Private	F. J. Philecox	G	18	18	36	Aug. 15		1
First Lieut	A. J. Myer	A	19	17	36	Aug. 4		
Sergeant	John Wittgenschlager	B	20	16	36	Aug. 18		3
Captain	O. F. Langenbach	H	16	19	35	Aug. 8		9
Sergeant	Charles Fink	D	16	19	35	Aug. 15		2
Major	W. T. Parsons	Field	17	18	35	Aug. 18		9
Private	DeW. Johnson	F	17	18	35	Aug. 8		
Lieutenant	A. B. Christy	I	18	17	35	Aug. 18		
Private	James Funnell	H	14	20	34	Aug. 4		
Private	C. E. Carlson	D	16	18	34	Aug. 15		2
First Sergt	F. T. Lambert	C	18	16	34	Aug. 15		3
Private	E. Hughes	D	20	14	34	Aug. 15		1
Colonel	S. M. Welch, Jr	Field	13	20	33	Aug. 29		9
Sergeant	Edward Cutler	I	17	16	33	Aug. 8		3
Private*	F. C. Haffa	A	17	16	33	Aug. 18		
Sergeant	E. A. Bergquist	D	18	15	33	Aug. 15		9
Corporal	W. Gravius, Jr.	D	18	15	33	Aug. 15		2
Captain	A. C. Lewis	I	19	14	33	Aug. 4		6
First Sergt	G. A. Milsom	B	19	14	33	Aug. 29		3
Private	W. W. Olheiser	F	14	18	32	Aug. 29		1
Private	W. E. Parker	B	15	17	32	Aug. 29		2
First Lieut	G. B. Hinckley	B	19	13	32	Aug. 15		
Sergeant	G. H. W. Urban	B	19	13	32	Aug. 29		2
Sergeant	Henry Clifton (R. G. G.)	N.C.S	14	17	31	Aug. 18		
Sergeant	Eli Ritter	F	15	16	31	Aug. 29		3
Private	C. H. Gibson	G	17	14	31	Aug. 15		4
Private	J. T. Inglsby	F	17	14	31	Sept. 25	C. M. C.	2
First Sergt	Thomas Saunders	A	18	13	31	Aug. 18		3
Sergeant	M. W. Halblaub	A	18	13	31	Aug. 18		4
Captain	J. B. Rawson	G	19	12	31	Aug. 15		1
Private	W. E. Aber	A	19	12	31	Aug. 29		3
Corporal	G. A. Schmidt	F	20	11	31	Sept. 25	C. M. C.	2
Captain	George J. Haffa	A	21	10	31	Aug. 4		1
Corporal	G. W. Nelson	H	22	9	31	Sept. 1		3
First Lieut	W. F. Nurzey	C	15	15	30	Aug. 29		1
Private	John S. Doorty	B	15	15	30	Aug. 29		2
Private	F. D. Bartholomew	A	16	14	30	Aug. 29		2
Private	Charles Kraetzman	H	16	14	30	Aug. 8		3
First Lieut	O. G. Nichols (Com'sy)	Staff	17	13	30	Aug. 29		7
Corporal	C. P. Funk	B	17	13	30	Aug. 15		1
Private	F. Katz	I	17	13	30	Oct. 6		
Private	Edward Walley	I	17	13	30	Aug. 4		3
Corporal	E. M. Aber	A	18	12	30	Aug. 29		3
Private	F. Grabenstatter	A	18	12	30	Aug. 29		
Private	G. Grabenstatter	A	18	12	30	Aug. 29		
Private	E. Millinger	D	18	12	30	Aug. 18		1
Corporal	T. O. Riley	I	19	11	30	Oct. 6		2
Private	A. Petterson	D	20	10	30	Aug. 15		2
Private	H. Brylski	I	10	19	29	Aug. 18		
Sergeant	James W. Simmons	A	12	17	29	Aug. 18		3
Corporal	Henry Brown	F	13	16	29	Aug. 29		2
Private	C. E. Connolly	C	13	16	29	Aug. 29		
Private	F. Dimick	G	13	16	29	Aug. 18		
Private	E. Oyen	G	13	16	29	Aug. 15		
Private	W. C. Tomjost	I	14	15	29	Aug. 29		1

SIXTY-FIFTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Corporal.....	C. J. Hager.....	H	15	14	29	Aug. 8	.....	2
Private.....	Charles Jaeger.....	H	15	14	29	Aug. 8	.....	.....
Private.....	P. Voght.....	D	15	14	29	Aug. 18	.....	1
Private.....	John Zimmerman.....	D	15	14	29	Aug. 18	.....	.....
Sergeant.....	M. Geary.....	I	16	13	29	Aug. 8	.....	3
Sergeant.....	William James.....	H	16	13	29	Aug. 8	.....	.....
Private.....	Irving Grady.....	I	16	13	29	Aug. 29	.....	.....
Private.....	H. F. Holkmeyer.....	F	16	13	29	Aug. 8	.....	3
Lieut.-Col.....	John E. Robie.....	Field	17	12	29	Aug. 18	.....	5
Private.....	Louis Adler.....	D	17	12	29	Aug. 15	.....	1
Private.....	J. Baum.....	H	17	12	29	Aug. 29	.....	.....
Private.....	J. A. Johndahl.....	D	17	12	29	Aug. 15	.....	1
Private.....	P. M. Conway.....	A	18	11	29	Aug. 29	.....	3
Q. M. Sergt.....	Robert Reed.....	H	19	10	29	Aug. 8	.....	2
Corporal.....	R. Westfall.....	I	20	9	29	Aug. 15	.....	2
Private.....	F. E. Cabot.....	F	11	17	28	Oct. 27	.....	.....
Private.....	John Mitchell.....	F	11	17	28	Aug. 18	.....	2
Corporal.....	Dan Worst.....	D	14	14	28	Aug. 18	.....	.....
Private.....	George Welcome.....	B	14	14	28	Aug. 15	.....	1
Q. M. Sergt.....	E. S. De Forest.....	A	15	13	28	Aug. 8	.....	6
Private.....	E. R. Boa.....	A	15	13	28	Aug. 8	.....	.....
Private.....	J. A. Eckert.....	C	15	13	28	Aug. 15	.....	.....
Private.....	George Miller.....	I	15	13	28	Aug. 29	.....	.....
Private.....	C. C. Whittemore.....	A	15	13	28	Aug. 18	.....	1
Sergeant.....	Alfred Osbrink.....	D	16	12	28	Aug. 15	.....	2
Corporal.....	L. H. Eller.....	F	16	12	28	Aug. 29	.....	2
Private.....	E. Casey, Jr.....	B	16	12	28	Aug. 29	.....	1
Private.....	F. P. Eckert.....	B	16	12	28	Aug. 15	.....	3
First Sergt.....	E. Trebold.....	H	17	11	28	Aug. 15	.....	1
Corporal.....	A. H. Coats.....	A	17	11	28	Aug. 8	.....	1
Corporal.....	F. A. Frine.....	A	17	11	28	Aug. 29	.....	3
Corporal.....	E. G. Hardy.....	H	17	11	28	Aug. 8	.....	4
Private.....	A. T. Conklin.....	C	17	11	28	Aug. 29	.....	.....
Private.....	George Holzworth.....	I	17	11	28	Aug. 29	.....	.....
Private.....	W. H. Todd.....	A	17	11	28	Aug. 29	.....	.....
Private.....	E. Stuhauer.....	A	19	9	28	Aug. 8	.....	.....
Private.....	P. A. Voigt.....	C	11	16	27	Aug. 29	.....	.....
Q. M. Sergt.....	F. W. Elsaesser.....	F	12	15	27	Aug. 18	.....	7
Private.....	G. H. Boxall.....	F	13	14	27	Aug. 18	.....	.....
Private.....	F. Burnett.....	I	13	14	27	Aug. 29	.....	.....
Private.....	Paul Valentine.....	I	13	14	27	Aug. 29	.....	.....
Private.....	William Mugridge.....	H	14	13	27	Aug. 8	.....	.....
Private.....	Frederick Brown.....	H	15	12	27	Aug. 8	.....	1
Private.....	H. Raymond.....	I	15	12	27	Aug. 8	.....	.....
Private.....	H. Smith.....	F	15	12	27	Aug. 8	.....	.....
First Lieut.....	E. A. Hall.....	F	16	11	27	Aug. 8	.....	2
Private.....	L. Adams.....	A	16	11	27	Aug. 8	.....	.....
Private.....	C. H. Davis.....	A	16	11	27	Aug. 8	.....	.....
Private.....	H. Harney.....	H	16	11	27	Aug. 8	.....	2
Private.....	B. Jaeger.....	H	16	11	27	Aug. 8	.....	.....
Private.....	L. J. Mehliz.....	D	16	11	27	Aug. 15	.....	.....
Private.....	C. J. Vomatter.....	A	16	11	27	Aug. 29	.....	.....
Corporal.....	C. E. Dreschel.....	G	17	10	27	Aug. 29	.....	2
Corporal.....	H. Gabriel.....	G	17	10	27	Aug. 15	.....	.....
Corporal.....	C. S. Kohler.....	A	17	10	27	Aug. 18	.....	1
Corporal.....	George Wally.....	I	17	10	27	Aug. 18	.....	3
Private.....	S. R. Case.....	A	17	10	27	Aug. 8	.....	.....
Private.....	E. C. Cornwell.....	B	17	10	27	Aug. 29	.....	.....
Private.....	Charles Weller.....	A	17	10	27	Aug. 8	.....	1
Private.....	J. W. Cupps.....	C	18	9	27	Aug. 29	.....	.....
Private.....	J. B. Garmon.....	D	18	9	27	Aug. 15	.....	2
Private.....	Charles Klock.....	I	18	9	27	Aug. 18	.....	1
Private.....	F. M. Rehler.....	D	18	9	27	Aug. 15	.....	.....
Corporal.....	T. Brown.....	I	19	8	27	Aug. 8	.....	5
Private.....	W. R. Kelley.....	F	20	7	27	Aug. 18	.....	2
Private.....	A. McLaughlin.....	H	8	18	26	Aug. 29	.....	2
Sergt.-Major.....	C. McKenzie.....	N.C.S	13	13	26	Aug. 18	.....	3
Private.....	E. W. Dobbins.....	H	13	13	26	Aug. 8	.....	1
Private.....	J. C. Evans.....	A	13	13	26	Aug. 18	.....	.....
Private.....	A. Koelkenbeck.....	A	13	13	26	Aug. 29	.....	.....

SIXTY-FIFTH REGIMENT — (Concluded).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Major	A. H. Briggs (Surg.)	Staff.	14	12	26	Sept. 4		6
Sergeant	M. Provost (Q. M. S.)	N.C.S	14	12	26	Aug. 18		2
Corporal	Lewis Faude	A	14	12	26	Aug. 18		
Private	J. Buellner	A	14	12	26	Aug. 29		
Corporal	Charles Dean	C	15	11	26	Aug. 18		4
Private	W. B. Brenner	A	15	11	26	Aug. 18		
Private	B. J. Brown	G	15	11	26	Aug. 15		
Private	M. C. Fix	A	15	11	26	Aug. 18		
Private	O. Haffa	D	15	11	26	Aug. 15		1
Private	W. B. Kohler	G	15	11	26	Aug. 15		
Private	Michael Korwowski	I	15	11	26	Oct. 6		1
Private	Frank Mason	A	15	11	26	Aug. 29		1
Private	W. B. Reed	F	15	11	26	Aug. 8		2
Private	John Smith	D	15	11	26	Aug. 18		
Sergeant	G. Meadway (Ord. Sergt.)	N.C.S	16	10	26	Aug. 18		3
Private	C. J. Clark, Jr.	F	16	10	26	Aug. 8		
Private	C. M. Elliot	A	16	10	26	Aug. 29		
Private	George Gertz	H	16	10	26	Aug. 8		1
Private	H. Haker	A	16	10	26	Aug. 8		
Private	R. A. Hood	A	16	10	26	Aug. 29		4
Private	Joseph Jerge	A	16	10	26	Aug. 29		
Private	C. H. Miller	A	16	10	26	Aug. 8		
Private	Charles Schell	B	16	10	26	Aug. 15		1
Private	N. Shaver	H	16	10	26	Aug. 29		
Private	Walter Smith	D	16	10	26	Aug. 15		
Private	P. Klein	G	17	9	26	Aug. 15		
Private	William McClelln	A	17	9	26	Aug. 8		
Captain	G. J. Metzger (I. R. P.)	Staff.	18	8	26	Sept. 4		5
Second Lieut.	W. C. Boardman	B	18	8	26	Aug. 29		
Private	Jac Hauck	D	18	8	26	Aug. 15		
Private	F. Kammerer	C	18	8	26	Aug. 29		
Private	L. P. M. Lang	B	18	8	26	Aug. 4		3
Private	J. J. Metz	E	18	8	26	Aug. 15		2
Sergeant	J. C. Flint	F	19	7	26	Aug. 18		5
Sergeant	Ed. Pundt	C	19	7	26	Aug. 29		2
Private	C. A. Anderson	C	10	15	25	Aug. 29		
Private	J. M. Halladay	C	12	13	25	Aug. 29		
Private	P. Hauck	I	12	13	25	Aug. 29		
Private	E. A. Taylor	B	12	13	25	Aug. 29		2
First Lieut.	W. H. Chapin (Adj't.)	Staff.	13	12	25	Aug. 29		1
Corporal	Joseph Reed	C	13	12	25	Aug. 15		1
Private	T. F. Miller	G	13	12	25	Aug. 15		
Captain	C. E. P. Babcock	F	14	11	25	Aug. 8		5
Second Lieut.	F. M. Chapin	D	14	11	25	Aug. 29		
Sergeant	James Boyne	I	14	11	25	Aug. 8		3
Corporal	T. Kingston	G	14	11	25	Oct. 6		
Private	R. Inderbitzen	D	14	11	25	Oct. 27		2
Private	Harry Wyatt	H	14	11	25	Aug. 8		
Private	C. Myer	I	14	11	25	Aug. 29		
Sergeant	V. H. Lytle	A	15	10	25	Aug. 18		1
Sergeant	F. E. Martin	B	15	10	25	Aug. 29		3
Private	J. J. Costello	G	15	10	25	Aug. 15		
Private	R. Ewart	D	15	10	25	Aug. 15		
Private	H. Massman	I	15	10	25	Aug. 29		
Private	Frank Morath	D	15	10	25	Aug. 18		2
Private	E. C. Blank	G	16	9	25	Aug. 15		1
Private	F. Goerken	D	16	9	25	Aug. 15		
Private	C. H. Hawkins	B	16	9	25	Aug. 15		
Private	C. F. Hoffman	C	19	9	25	Aug. 15		
Private	Joseph Walter	G	16	9	25	Aug. 15		2
Private	S. Isch	I	17	8	25	Oct. 6		
Private	C. L. Lambrecht	C	17	8	25	Aug. 15		
Private	Charles Seckler	B	17	8	25	Aug. 15		
Sergeant	F. A. Nussbaum	B	18	7	25	Aug. 15		2
Private	M. W. Buck	H	18	7	25	Aug. 8		
Q. M. Sergt.	A. A. Brandel	B	19	6	25	Aug. 29		3
Private	H. Kohler	G	19	6	25	Aug. 15		
Private	W. H. Kreinhader	I	19	6	25	Aug. 8		
Corporal	F. Sanders	D	20	5	25	Aug. 15		2

Total..... 212

SEVENTY-FOURTH REGIMENT.

(Figure of merit..... 52.62.)

Rank.	NAME.	Company.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Ord. Sergeant	J. M. Garratt*	N.C.S	23	22	45	Aug. 22	C. M. C.	5
Q. M. Sergt.	F. R. Hickman*	F	21	23	44	Sept. 28	C. M. C.	4
Private	H. F. Floyd*	D	21	23	44	July 18		3
First Sergt.	E. L. Gager*	B	22	22	44	Sept. 15	C. M. C.	7
Sergeant	E. A. Lockwood*	F	20	23	43	July 12	C. M. C.	5
Private	W. F. Lenshuer*	B	18	24	42	Oct. 10	C. M. C.	
Captain	William Franklin (I. R. P.)	Staff.	19	20	39	Oct. 30		7
Sergeant	W. A. McDougall.	F	18	20	38	Oct. 13	C. M. C.	2
First Lieut.	H. C. Balcom	B	20	18	38	July 25		6
Lieut.-Col.	U. S. Johnson.	Field	19	18	37	Aug. 1		7
Private	W. F. Drechsler	G	16	20	36	Sept. 4		1
First Lieut.	J. C. White (Adjt.)	Staff.	20	16	36	July 18		5
Corporal.	C. H. Baker	B	17	18	35	Sept. 15	C. M. C.	3
Private	P. C. Deming	F	17	18	35	Aug. 1		1
Sergeant	W. A. Flitt	B	19	16	35	Oct. 3	C. M. C.	5
Private	C. A. Scherbarth	B	20	15	35	Oct. 30		
First Sergt.	F. C. Young.	F	21	14	35	July 14	C. M. C.	5
Private	H. J. Hoffer.	F	13	21	34	Sept. 10		1
Sergeant	Harry Hickman	F	15	19	34	July 28		5
Private	F. W. Chester.	A	15	19	34	Oct. 30		4
First Lieut.	W. E. Otto.	F	19	15	34	Aug. 1		4
Corporal.	S. A. Gaffney	E	19	15	34	July 28		2
Private	G. W. Russ.	A	16	17	33	Oct. 30		
Captain	Peter Paulus	G	17	16	33	July 28		8
First Sergt.	J. R. Kimball	D	17	16	33	Aug. 1		5
Private	D. O'Hara	A	17	16	33	July 18		
Second Lieut.	G. M. Rose	D	20	13	33	July 18		
Captain	Walter North (Chap.)	Staff.	15	17	32	Sept. 4		5
Private	E. J. Simpson.	F	16	16	32	Aug. 1		1
First Sergt.	F. A. Dorr.	C	17	15	32	Sept. 4		3
Private	G. W. Armstrong	E	20	12	32	Oct. 30		
Private	J. A. Amsden, Jr.	F	20	12	32	Sept. 22	C. M. C.	
First Lieut.	H. R. Clark (Q. M.)	Staff.	21	11	32	Oct. 23		6
Q. M. Sergt.	W. J. Jones	A	14	17	31	Oct. 30		
Captain	G. C. Fox	F	16	15	31	July 7		7
Private	C. L. Bailey	B	16	15	31	Oct. 30		
Sergeant	C. N. McMichael (Hos. St.)	N.C.S	17	14	31	July 28		
Private	A. W. Clute	C	17	14	31	July 25		1
Private	G. A. Mason, Jr.	E	17	14	31	Sept. 4		1
Second Lieut.	S. B. Newton	B	18	13	31	Sept. 10		1
Corporal.	C. O. Bockman	A	18	13	31	Sept. 10		2
Private	C. P. Stearns	F	18	13	31	July 28		4
Corporal	J. P. Diehl, Jr.	B	19	12	31	July 25		6
Private	A. W. Shaw	F	20	11	31	Aug. 1		1
First Lieut.	H. L. Fisher, Jr.	D	21	10	31	July 18		2
Private	J. N. W. Crampton	F	12	18	30	July 28		
Sergeant	F. G. Alderman	D	13	17	30	Oct. 30		4
Sergeant	A. C. Turner (C. B.)	N.C.S	15	15	30	Aug. 1		2
Sergeant	M. S. Ackerman	F	15	15	30	Sept. 10		4
Private	A. Hambleton	D	15	15	30	Sept. 10		
Private	E. F. Hickman	F	15	15	30	Sept. 11	C. M. C.	1
Captain	C. L. Abell	C	16	14	30	July 18		4
Private	G. T. Bowman	F	16	14	30	Oct. 30		
First Lieut.	J. F. Clark	E	17	13	30	July 28		2
First Lieut.	W. R. Buck (Com.)	Staff.	17	13	30	July 28		2
Private	C. H. Kamman	E	18	12	30	Aug. 1		
Private	F. Holtz	A	19	11	30	July 28		
Second Lieut.	C. T. Roberts	A	20	10	30	Sept. 10		1
Private	Alb. Sucron	A	11	18	29	June 15		
Corporal.	E. A. Taylor	F	13	16	29	July 28		3
First Lieut.	C. E. Oberst	G	14	15	29	July 28		5
Private	S. D. Jerome	B	15	14	29	June 16		3
Private	W. A. Walsh, Jr.	B	15	14	29	Sept. 1		
Captain	A. J. Dance	D	16	13	29	Sept. 10		3
Captain	G. W. York (Asst. Surg.)	Staff.	16	13	29	July 28		5
First Sergt.	F. W. Juengling	E	17	12	29	July 28		2
Private	T. H. Newbold	B	17	12	29	July 25		

SEVENTY-FOURTH REGIMENT — (Continued).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	J. R. Zahn	B	20	9	29	Aug. 1		
Corporal	C. J. Newman	B	12	16	28	July 25		5
Private	E. S. Jehle	B	12	16	28	July 14	C. M. C.	1
Private	J. L. Wagenaar	D	13	15	28	Oct. 30		
Corporal	C. H. Nagel	F	14	14	28	Sept. 10		2
Private	H. Gregg	B	14	14	28	Oct. 30		
Private	M. J. Leonard	F	14	14	28	Aug. 1		3
Private	Thos. Walsh	D	14	14	28	Oct. 30		3
Major	G. A. Davis	F	15	13	28	July 28		2
Corporal	C. A. Smith	F	15	13	28	Aug. 1		2
Private	H. M. Jones	B	15	13	28	Sept. 10		
Second Lieut.	G. E. Gattey	C	16	12	28	Sept. 10		
Corporal	C. E. Kirtland	D	16	12	28	Sept. 10		3
Private	N. C. Bidwell	C	16	12	28	Sept. 4		2
Second Lieut.	W. A. Angus	E	17	11	28	July 28		2
Private	F. W. Eno	B	17	11	28	Aug. 4		
Corporal	P. H. Watters	C	18	10	28	July 18		2
Private	F. Bennett	F	18	10	28	July 28		
Private	W. H. Egather	D	18	10	28	Sept. 10		
Private	S. A. Scully	E	19	9	28	Oct. 23		
Private	F. B. Lampherr	D	11	16	27	Sept. 10		
Sergeant	J. T. Robson	E	12	15	27	July 28		1
Private	P. Holland	A	13	14	27	Oct. 30		
Private	H. Lewenicht	D	13	14	27	Oct. 30		2
Private	L. E. Squier	E	13	14	27	July 28		
Private	W. H. German	D	14	13	27	Sept. 10		
Sergeant	F. A. White	C	15	12	27	July 18		6
Private	E. M. Richardson	F	15	12	27	Oct. 30		
Private	C. J. Wolf	A	15	12	27	July 18		
Private	D. R. Clarkson	F	16	11	27	Aug. 1		
Private	E. C. Shoemaker	E	16	11	27	Sept. 4		1
Private	R. A. Greenfield	F	17	10	27	Sept. 10		2
Private	W. E. Harrell	A	17	10	27	July 18		
Corporal	J. McLee	A	18	9	27	Oct. 30		
Private	F. H. Balcom	B	18	9	27	Sept. 10		2
Private	F. Habitz	D	18	9	27	Oct. 30		
Private	E. C. Neal	B	18	9	27	Sept. 10		1
Private	V. M. Stanley	E	18	9	27	July 28		1
Private	J. R. Porter	F	19	8	27	Sept. 10		
Private	J. E. Fisher	A	20	7	27	Oct. 30		
Private	W. S. Lull	B	10	16	26	July 25		4
Private	J. W. Marther	C	12	14	26	Sept. 4		4
Corporal	W. J. Hastings	A	13	13	26	Oct. 30		1
Second Lieut.	E. P. Cottle	F	14	12	26	Sept. 10		1
Sergeant	W. J. Gordon	A	14	12	26	Oct. 30		2
Private	L. A. Berry	F	14	12	26	Oct. 30		1
Corporal	H. C. Bostwick	E	15	11	26	July 28		2
Corporal	T. D. Macnoe	E	15	11	26	Oct. 23		2
Private	C. M. Amidon	G	15	11	26	July 25		
Private	W. E. Courter	B	15	11	26	Oct. 30		
Private	A. A. Wilson	F	15	11	26	Sept. 10		
Private	J. G. Fuesz	C	16	10	26	Sept. 4		
First Lieut.	W. J. Sloan	C	17	9	26	Aug. 1		5
Corporal	C. H. Callahan	E	17	9	26	Aug. 1		2
Private	J. S. Embleton	E	17	9	26	July 28		
Captain	F. N. Farrar	E	18	8	26	July 28		2
Private	R. M. Harding	A	18	8	26	July 28		
Private	H. F. Holtz, Jr.	A	18	8	26	Oct. 30		
Private	J. C. Green	A	19	7	26	Oct. 30		
Private	N. W. Muller	B	20	6	26	Aug. 4		
Sergeant	Adam Sauer	E	8	17	25	July 25		1
Private	W. A. Barrows	F	12	13	25	July 28		
Private	Wm. Meissner	G	12	13	25	July 28		2
Private	H. W. Sweet	F	12	13	25	Oct. 30		
Private	T. C. Cleary	E	13	12	25	July 28		2
Private	E. J. Keller	B	14	11	25	July 25		1
Private	J. B. Rinkel	F	14	11	25	Sept. 11	C. M. C.	
Private	F. F. Meinhardt	A	15	10	25	Sept. 10		
Private	W. Morgan	D	15	10	25	July 18		
Private	E. A. St. John	F	15	10	25	Sept. 11	C. M. C.	

SEVENTY-FOURTH REGIMENT — (*Concluded*).

Rank.	NAME.	Company.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
			200 yards.	500 yards.	Total.			
Private	H. Froment	D	16	9	25	July 18	.....	.....
Private	A. J. Herold	C	16	9	25	Aug. 1	.....	1
Private	Henry Post	E	17	8	25	July 28	.....	1
Private	C. A. Hawkins	B	18	7	25	Aug. 1	.....	2
Corporal	G. F. Meissner	G	20	5	25	July 28	.....	2
Private	E. T. Sherer	D	20	5	25	Oct. 30	.....	.....

Total 143

FIRST SEPARATE COMPANY.

(Figure of merit 59.22.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Lieut. ..	G. T. Wilkins	19	15	34	Oct. 10	.....	9
Second Lieut. ..	A. C. Harwich	19	13	32	Oct. 10	.....	10
Private	H. J. Mizner	19	13	31	Nov. 1	.....	1
Captain	A. Gudley	16	14	30	Oct. 10	.....	6
Private	G. E. Almy	13	16	29	Oct. 10	.....	1
Corporal	A. W. Hathaway	14	15	29	Nov. 1	.....	2
Private	F. A. Beach	14	15	29	Oct. 10	.....	.....
Sergeant	C. W. Miller	15	14	29	Nov. 1	.....	5
Sergeant	Z. A. Zettuburg	13	15	28	Oct. 10	.....	3
Private	J. M. Brown	13	15	28	Nov. 1	.....	.....
First Lieut. ...	B. S. Holt (Asst. Surg.)	16	12	28	Nov. 1	.....	3
Private	M. V. Margeson	18	10	28	Nov. 1	.....	.....
Private	J. L. Lott	15	12	27	Nov. 1	.....	.....
Corporal	W. G. Carroll	17	10	27	Oct. 10	.....	2
Private	C. E. Wright	22	5	27	Oct. 10	.....	1
Private	J. Dwyer	11	15	26	Nov. 1	.....	.....
Private	C. C. Knapp	11	15	26	Nov. 1	.....	.....
Private	P. J. Wescott	11	15	26	Nov. 1	.....	.....
Private	W. H. Hopkins	12	14	26	Oct. 10	.....	3
Private	Wm. Murphy	12	14	26	Nov. 1	.....	.....
Private	W. A. Taft	14	12	26	Nov. 1	.....	.....
Private	H. Beyer	15	11	26	Nov. 1	.....	.....
Private	W. W. Shaw	15	11	26	Nov. 1	.....	.....
Private	H. J. Lepes	17	9	26	Nov. 1	.....	.....
Private	J. Osterhout	8	17	25	Nov. 1	.....	.....
Private	Jno. Barrett	9	16	25	Oct. 10	.....	5
Private	E. E. Fox	13	12	25	Oct. 10	.....	.....
Private	W. E. Wheeler	15	10	25	Oct. 10	.....	1
Private	G. J. Rapalee	17	8	25	Oct. 10	.....	.....

Total 29

SECOND SEPARATE COMPANY.

(Figure of merit. 73.75.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain	W. M. Kirby*	22	22	44	May 30		10
Private	E. N. Ross	17	22	39	Sept. 4		2
Private	B. F. Webster	17	20	37	Sept. 3		6
Private	H. T. McNaughton	14	21	35	May 30		2
Private	M. G. Culver	17	18	35	Sept. 3		5
Private	N. B. Thayer	20	15	35	Sept. 3		4
Sergeant	H. R. Kidney	16	18	34	Sept. 3		5
Private	J. W. De Ratt	14	19	33	May 30		
Private	J. J. Trowbridge	17	15	32	Sept. 4		6
Sergeant	F. G. Jones	18	14	32	Sept. 3		6
Private	C. W. Hollingshead	19	13	32	May 30		2
Private	L. J. Burr	15	16	31	Oct. 8		
Private	M. J. Bulkley	16	15	31	Sept. 3		3
Private	H. W. Bulkley	16	15	31	Sept. 3		
Private	E. R. Buckingham	17	14	31	May 30		
Private	F. C. Paul	18	13	31	Oct. 8		
Sergeant	W. H. Martin	19	12	31	Oct. 8		6
Private	H. F. Hobbs	21	10	31	Sept. 3		
Private	H. E. Hills	13	17	30	Oct. 8		6
Private	L. Miller	14	16	30	May 30		4
Private	F. W. Miller	15	15	30	May 30		3
Private	H. Mott	16	14	30	Sept. 3		5
Private	F. H. Putnam	16	14	30	Sept. 4		7
Private	H. S. Squyer	16	14	30	Sept. 3		6
First Lieut.	H. S. Dunning	17	13	30	May 30		7
Private	W. G. Cowell	18	12	30	Sept. 3		9
Private	H. R. Osborn	20	10	30	May 30		3
Private	L. V. Main	21	9	30	May 30		
Private	S. A. Clark	15	14	29	Oct. 8		
First Lieut.	Jno. Gerin (Asst. Surg.)	17	12	29	May 30		7
Private	D. P. Hardy	17	12	29	Sept. 3		5
First Sergt.	F. J. Stupp	18	11	29	Sept. 5		6
Private	S. H. Westover	11	17	28	May 30		11
Private	H. D. Ramsay	14	14	28	Sept. 5		3
Private	S. S. Salisbury	14	14	28	May 30		
Private	C. H. C. Caney	16	12	28	Sept. 5		3
Private	L. F. Carlisle	16	12	28	Sept. 3		2
Private	D. Judson	17	11	28	Sept. 3		4
Private	F. H. Nickason	13	14	27	May 30		1
Private	C. O. Boyce	15	12	27	Sept. 3		2
Private	C. A. Tournier	15	12	27	Oct. 8		2
Second Lieut.	C. J. Barber	16	11	27	Sept. 3		8
Private	E. Van Alstine	16	11	27	Sept. 3		2
Private	F. S. Cole	18	9	27	Sept. 3		6
Private	F. M. Whaley	19	8	27	May 30		4
Private	C. A. Koling	10	16	26	Sept. 3		
Private	B. F. Hughson	11	15	26	May 30		2
Private	E. G. Dratt	13	13	26	May 30		2
Corporal	E. R. Fitch	14	12	26	Sept. 3		7
Private	F. P. Chesebro	14	12	26	Sept. 4		6
Private	J. H. Rublee	14	12	26	Sept. 3		2
Corporal	J. C. Bowen	15	11	26	Sept. 4		4
Corporal	W. T. Howard	15	11	26	May 30		5
Corporal	H. F. Horton	17	9	26	Sept. 4		5
Private	J. Laurie	17	9	26	May 30		1
Private	J. L. Hickok	8	17	25	Sept. 3		1
Private	A. W. Lawton, Jr.	11	14	25	May 30		
Private	J. E. Quick	11	14	25	Sept. 3		2
Private	J. A. Washburn	12	13	25	May 30		4
Corporal	J. W. Haight	13	12	25	May 30		6
Private	F. S. Coburn	13	12	25	Sept. 3		5
Private	C. G. Walker	13	12	25	May 30		
Private	C. R. Hamblin	14	11	25	Oct. 8		1
Private	H. N. Cameron	15	10	25	May 30		
Private	F. S. Hall	15	10	25	Sept. 4		2
Private	F. Shoemaker	15	10	25	May 30		
Private	J. Thomas	15	10	25	May 30		

SECOND SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	A. Goldthorpe.....	16	9	25	Sept. 3	.....	.....
Private	B. Irish	16	9	25	May 30	.....	2
Private	H. A. Barnes.....	17	8	25	May 30	.....	.....
Private	A. J. Young.....	17	8	25	Sept. 3	.....	2
Private	W. H. Hayden.....	19	6	25	Sept. 3	.....	.....

Total 72

EIGHTH SEPARATE COMPANY.

(Figure of merit..... 53.24)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	J. C. McNab.....	20	19	39	Sept. 7	.....	.....
Private	E. H. Miller.....	14	22	36	Sept. 19	.....	1
Private	F. T. Ergabroadt.....	16	19	35	Sept. 19	.....	1
Private	F. A. Meyers.....	18	17	35	Sept. 7	.....	.....
Corporal.....	J. H. Taylor	18	14	32	Sept. 7	.....	9
Private	C. S. Gibbs.....	14	18	32	Sept. 19	.....	1
Corporal.....	C. A. Blazo.....	14	17	31	Sept. 19	.....	.....
Private	J. H. Taylor	13	17	30	Sept. 19	.....	2
Private	C. W. Bastable.....	16	13	29	Sept. 7	.....	.....
Corporal.....	H. A. Swift.....	17	12	29	Sept. 19	.....	3
Private	G. D. Seel.....	18	11	29	Sept. 19	.....	3
Private	A. F. Carey.....	19	10	29	Sept. 19	.....	1
Captain.....	H. B. Henderson	13	15	28	Sept. 7	.....	8
First Lieut..	F. J. Hess.....	16	12	28	Sept. 7	.....	2
Corporal.....	L. B. Thrasher	12	15	27	Sept. 19	.....	3
Private	A. C. Colby.....	12	15	27	Sept. 19	.....	.....
Private	J. H. Perkins.....	14	13	27	Sept. 7	.....	3
Private	W. J. Millington.....	17	10	27	Sept. 7	.....	2
Second Lieut.	F. W. G. Bailey.....	18	9	27	Sept. 7	.....	6
Private	G. J. Masey.....	18	9	27	Sept. 7	.....	1
Corporal.....	F. W. White.....	13	13	26	Sept. 7	.....	.....
Private	Joseph Gibson	13	13	26	Sept. 19	.....	.....
Private	W. E. Thomas.....	16	10	26	Sept. 19	.....	.....
Private	L. F. Zimmer.....	13	12	25	Sept. 7	.....	.....
Sergeant.....	Frank Bennett.....	17	8	25	Sept. 7	.....	6

Total 25

THIRTEENTH SEPARATE COMPANY.

(Figure of merit..... 42.14.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	C. M. Mechals	18	17	35	Aug. 28	.....	.....
Private	L. Hazeltine.....	20	11	31	Aug. 27	.....	.....
Private	L. A. Fenton.....	19	9	28	Aug. 27	.....	.....
Private	W. A. Warrenner.....	20	8	28	Aug. 28	.....	.....
Private	T. B. Cooley	13	14	27	Aug. 27	.....	.....
Corporal	E. C. Mayhew	14	12	26	Aug. 28	.....	.....
Sergeant	E. P. Bailey	16	11	26	Aug. 28	.....	.....
Captain	Henry Smith	14	11	25	Aug. 28	.....	.....
Corporal	W. L. Butts	16	9	25	Aug. 28	.....	.....
First Lieut.	R. E. Fenton.....	18	7	25	Aug. 27	.....	.....
Sergeant	H. Scoville.....	18	7	25	Aug. 28	.....	.....
Private	W. S. Baley	18	7	25	Aug. 28	.....	.....

Total 12

TWENTY-FIFTH SEPARATE COMPANY.

(No practice.)

TWENTY-SIXTH SEPARATE COMPANY.

(Figure of merit..... 51.52.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal.....	F. D. Gunning.....	15	20	35	Aug. 29	.....	3
Corporal.....	F. H. Dalrymple.....	16	17	33	July 18	.....	2
Private	F. Ostrander.....	18	13	31	July 18	.....	1
First Lieut.	F. B. Park	19	12	31	July 17	.....	1
Private	E. L. Crego	17	13	30	July 17	.....	1
Private	Wm. Wentz.....	17	13	30	Aug. 29	.....	2
Corporal	E. Van Buskirk	16	13	29	July 18	.....	6
Private	S. Kline.....	17	12	29	July 18	.....	3
Private	J. H. Van Tassell.....	17	12	29	July 18	.....	1
Private	Wm. Pease	18	11	29	July 18	.....	1
Second Lieut.	F. J. Jones.....	12	15	27	July 17	.....	3
Private	Chas. Teed	13	14	27	July 18	.....	.....
Private	E. E. Tenyck	15	12	27	Aug. 29	.....	.....
Private	E. J. Brown	16	11	27	July 17	.....	4
Private	Geo. Heart.....	16	11	27	July 18	.....	1
Private	E. D. Fletcher	18	9	27	Aug. 29	.....	2
Private	F. M. Jones	8	18	26	Aug. 29	.....	3
Captain	R. P. Bush	12	14	26	Aug. 29	.....	.....
Corporal	C. M. Ersley	14	12	26	Aug. 29	.....	4
Q. M. Sergt.	A. J. Brown.....	15	11	26	Aug. 29	.....	8
Sergeant	S. A. Van Demark.....	15	11	26	July 18	.....	5
Private	L. French	15	11	26	Aug. 29	.....	1
Private	F. Rockwell	15	11	26	July 18	.....	1
Private	C. J. Burt	16	10	26	July 17	.....	2
Private	C. E. Stanton	16	10	26	Aug. 29	.....	2
Private	J. R. Cummings.....	13	12	25	July 17	.....	.....
Private	G. O. Wetherell.....	13	12	25	July 18	.....	.....
Private	T. Cahill	14	11	25	Aug. 29	.....	.....

TWENTY-SIXTH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	John Rife	15	10	25	July 17	.....	1
Private	F. Williams	15	10	25	July 18	.....	1
Private	M. M. Doyle	16	9	25	July 17	.....	.....
Private	Wm. Ware	17	8	25	July 17	.....	.....

Total 32

TWENTY-NINTH SEPARATE COMPANY.

(Figure of merit 45.56.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal	G. E. Vickery	16	17	33	Oct. 5	.....	1
Private	Wm. Smith	18	14	32	Oct. 5	.....	.....
Private	J. McCully	10	17	27	Oct. 5	.....	3
Private	John Monaghan	16	11	27	Aug. 15	.....	3
Private	N. M. Haskell	17	10	27	Aug. 15	.....	.....
Private	W. F. Aherns	16	10	26	Aug. 15	.....	.....
Private	H. M. Stearns	22	4	26	Aug. 15	.....	.....
Corporal	F. Wells	16	9	22	Oct. 5	.....	2
Private	G. W. Stoffel	18	7	25	Oct. 5	.....	.....

Total 9

THIRTIETH SEPARATE COMPANY.

(Figure of merit 66.41.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal	T. A. Brown *	24	23	47	Oct. 25	C. M. C.	3
Private	J. Edwards *	21	22	43	Oct. 25	C. M. C.	5
Private	C. A. Phillips	17	21	38	Aug. 27	.....	2
Private	O. C. Bidwell	17	19	36	Aug. 27	.....	1
Private	W. C. Peobles	19	16	35	Aug. 27	.....	4
Private	E. B. Weaver	19	16	35	Aug. 27	.....	1
Private	E. F. Aldridge	20	15	35	Aug. 27	.....	4
Private	W. A. Ballard	15	19	34	Aug. 27	.....	1
Second Lieut.	J. T. Sadler	15	18	33	Aug. 28	.....	8
Sergeant	F. E. Smith	16	17	33	Aug. 27	.....	5
Private	R. E. Clisdell	15	17	32	Oct. 11	.....	.....
Private	J. E. Varnum	18	14	32	Aug. 28	.....	2
Private	W. G. Barney	16	15	31	Aug. 27	.....	.....
Private	F. C. Carpenter	16	15	31	Aug. 27	.....	3
Private	J. F. Berry	18	13	31	Aug. 27	.....	3
Private	B. C. White	15	15	30	Aug. 27	.....	4

THIRTIETH SEPARATE COMPANY — (Concluded).

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Corporal.....	P. E. Meyer.....	16	14	30	Aug. 28	.....	3
Private.....	G. C. Miller.....	17	13	30	Aug. 27	.....	1
Corporal.....	C. W. Stuart.....	16	13	29	Aug. 27	.....	1
Captain.....	R. Morse.....	12	16	28	Aug. 28	.....	9
Private.....	F. M. Jones.....	16	12	28	Aug. 27	.....	3
Private.....	D. M. Slater.....	12	15	27	Aug. 27	.....	.....
Private.....	H. M. Beardsley.....	13	14	27	Aug. 27	.....	1
Private.....	J. Murray.....	18	9	27	Aug. 28	.....	.....
Q. M. Sergt....	R. Ker.....	10	16	26	Oct. 11	.....	5
First Sergt....	H. N. Hoffman.....	12	14	26	Aug. 28	.....	5
Private.....	W. E. Teary.....	12	14	26	Aug. 28	.....	4
Sergeant.....	J. M. Elston.....	13	13	26	Aug. 27	.....	10
Private.....	F. R. Knapp.....	13	13	26	Oct. 11	.....	3
Corporal.....	E. H. Tidd.....	14	12	26	Oct. 25	C. M. C.....	1
Private.....	L. H. Merchant.....	17	9	26	Aug. 27	.....	.....
Private.....	W. J. Lormore, Jr.....	19	7	26	Aug. 27	.....	1
Corporal.....	G. A. Gunville.....	12	13	25	Aug. 28	.....	1
Private.....	J. S. Hoffman.....	12	13	25	Oct. 11	.....	.....
Private.....	W. B. Tenbroeck.....	12	13	25	Oct. 11	.....	4
First Lieut....	E. M. Hoffman.....	13	12	25	Aug. 27	.....	10
Private.....	F. B. Shaw.....	13	12	25	Aug. 28	.....	.....
Private.....	L. A. Merrill.....	14	11	25	Aug. 27	.....	1
Private.....	G. Edminster.....	17	8	25	Aug. 27	.....	.....

Total 39

THIRTY-FOURTH SEPARATE COMPANY.

(Figure of merit..... 57.17.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Sergeant.....	G. E. Gasper.....	20	18	38	July 19	.....	5
Private.....	H. B. Tuttle.....	20	16	36	July 19	.....	2
Private.....	C. W. Parker.....	19	14	33	Oct. 9	.....	3
Private.....	F. A. Rogers.....	16	16	32	July 19	.....	1
Private.....	F. L. Combs.....	13	18	31	Oct. 9	.....	3
Private.....	W. H. Tulett.....	13	18	31	July 20	.....	3
Private.....	E. C. Nichols.....	14	17	31	Oct. 9	.....	2
Private.....	James Catchpole.....	14	16	30	July 20	.....	3
Q. M. Sergt....	C. H. Keppel.....	15	15	30	July 19	.....	1
Captain.....	William Wilson.....	19	11	30	July 19	.....	6
Sergeant.....	R. J. Wyatt.....	16	13	29	July 20	.....	3
Private.....	W. J. McMaster.....	17	12	29	July 20	.....	2
Private.....	C. A. Slocum.....	18	11	29	July 19	.....	.....
Private.....	F. E. Fairfax.....	16	12	28	July 19	.....	2
Corporal.....	D. R. Hawkins.....	20	7	27	July 19	.....	4
Private.....	G. A. McMaster.....	15	11	26	Oct. 9	.....	.....
Private.....	J. L. Cowing.....	17	9	26	July 19	.....	.....
Private.....	J. Deneen.....	18	8	26	July 20	.....	.....
Second Lieut.	F. A. Marlette.....	14	11	25	Oct. 9	.....	.....
First Sergt....	H. B. Graves.....	15	10	25	July 20	.....	1
Private.....	C. C. Reed.....	16	9	25	July 19	.....	.....
Private.....	E. E. Merry.....	18	7	25	July 19	.....	3

Total 22

THIRTY-EIGHTTH SEPARATE COMPANY.

(Figure of merit..... 50.22.)

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain.....	F. J. Stearns.....	19	16	35	June 6	.....	7
First Lieut...	D. H. Tiftt.....	21	10	31	Aug. 16	.....	1
Private.....	J. Wright.....	12	17	29	June 6	.....	1
Corporal.....	W. R. Shays.....	19	9	28	Aug. 16	.....	1
Private.....	G. D. Edmundson.....	21	7	28	June 6	.....	.....
Private.....	W. E. Boco.....	13	14	27	June 6	.....	1
Private.....	W. A. Manor.....	13	14	27	June 6	.....	.....
Private.....	G. F. Kinsett.....	13	13	26	June 6	.....	1
Private.....	A. J. Bell.....	15	11	26	June 6	.....	.....
Private.....	R. G. Swinerton.....	16	10	26	June 6	.....	.....
Private.....	W. J. Parker.....	17	9	26	June 6	.....	1
Private.....	W. J. Cameron.....	14	11	25	June 6	.....	.....
Corporal.....	C. F. Fordham.....	15	10	25	June 6	.....	.....
Private.....	E. J. Davis.....	15	10	25	Aug. 16	.....	1
Private.....	F. Murdock.....	16	9	25	Aug. 16	.....	1
Q. M. Sergt...	A. L. Bilgus.....	17	8	25	Aug. 16	.....	6

Total..... 16

FORTIETH SEPARATE COMPANY.

(Figure of merit..... 32.26.)

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Sergt...	W. J. Higgins.....	16	16	32	Aug. 14	.....	.....
Private.....	S. E. Stanes.....	21	11	32	Aug. 14	.....	.....
Private.....	E. C. Hughes.....	14	13	27	Aug. 14	.....	.....
Sergeant.....	Charles Donley.....	17	9	26	Aug. 14	.....	1
Private.....	Jac. Jutton.....	16	9	25	Aug. 14	.....	.....

Total..... 5

FORTY-FIRST SEPARATE COMPANY.

(Figure of merit..... 14.00.)

Rank.	NAME.	SCORES.			Date of qualification.	If match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
First Lieut...	W. J. Blakeley.....	20	21	41	Aug. 17	.....	9
First Lieut...	H. C. Bruno (Asst. Surg.).....	21	17	38	Aug. 17	.....	.....
Private.....	A. P. Burdick.....	20	8	28	Aug. 17	.....	.....
Second Lieut.	A. E. Oberlander.....	16	9	25	Aug. 17	.....	1
First Sergt...	J. C. Milligan.....	19	6	25	Aug. 17	.....	.....

Total..... 5

FORTY-SECOND SEPARATE COMPANY.

(Figure of merit..... 74.32.)

Rank.	NAME.	SCORES.			Date of qual- ification.	If in match, state what.	Previous qual- ifications.
		200 yards.	500 yards.	Total.			
Private	J. C. Brewster*	22	25	47	Aug. 20	C. M. C.	2
Private	C. Pratt*	22	25	47	July 10	C. M. C.	2
Corporal	E. O. Babcock*	22	24	46	Sept. 18	C. M. C.	2
Private	G. H. Salt*	21	23	44	Sept. 18	C. M. C.	1
Private	E. E. Philpott*	22	22	44	Sept. 25	C. M. C.	2
First Lieut	L. W. Pettibone*	20	23	43	July 12	C. M. C.	2
Corporal	George Baker*	20	23	43	Aug. 7	C. M. C.	2
Private	Robert Sinclair*	20	23	43	Sept. 3	C. M. C.	1
Private	D. Rickoff*	21	22	43	Aug. 21	C. M. C.	2
Sergeant	F. C. Deveau*	22	21	43	Aug. 1	C. M. C.	2
Private	L. A. Boor*	19	23	42	Sept. 21	C. M. C.	1
Private	F. A. Locher*	21	21	42	July 12	C. M. C.	2
Private	R. M. Pool	18	22	40	Aug. 20	C. M. C.	1
Q. M. Sergt.	R. A. Schuyler	19	21	40	Sept. 13	C. M. C.	2
Corporal	D. Whitney	22	18	40	Aug. 28	C. M. C.	2
Corporal	F. W. Oliver	18	20	38	July 9	C. M. C.	2
Private	F. W. Lawson	18	17	35	July 21	C. M. C.	2
Private	William Young	20	15	35	July 14	C. M. C.	2
Private	W. A. Frazer	17	17	34	Nov. 1	C. M. C.	1
Private	S. M. Brooks	19	15	34	Aug. 10	C. M. C.	2
Private	Thomas Conroy	19	15	34	July 25	C. M. C.	2
Private	George Shephard	12	21	33	Oct. 26	C. M. C.	1
First Lieut	W. R. Campbell (Asst. Surg.)	16	17	33	July 6	C. M. C.	2
Private	J. H. Finnell	18	15	33	July 25	C. M. C.	1
Captain	C. B. Gaskill	17	15	32	Oct. 24	C. M. C.	2
Private	B. B. Young	14	17	31	Aug. 30	C. M. C.	1
Private	G. L. Gaiser	15	16	31	July 26	C. M. C.	1
Private	A. A. Oatman	15	16	31	July 25	C. M. C.	1
Private	T. J. Walker, Jr.	15	16	31	July 26	C. M. C.	1
Private	F. A. Dudley	16	15	31	Sept. 5	C. M. C.	2
Sergeant	S. J. Mason	18	13	31	July 20	C. M. C.	2
Private	William Roland	19	12	31	July 26	C. M. C.	2
First Sergt.	C. E. Cromley	15	15	30	Aug. 1	C. M. C.	2
Private	H. Campbell	15	15	30	Oct. 22	C. M. C.	2
Corporal	W. Jones	16	14	30	July 25	C. M. C.	2
Private	D. F. Bentley	19	11	30	Oct. 24	C. M. C.	2
Private	S. K. Dietrick	12	17	29	July 26	C. M. C.	2
Second Lieut.	M. B. Butler	14	15	29	Aug. 10	C. M. C.	2
Private	R. Barr	14	15	29	July 25	C. M. C.	1
Private	N. H. Kimball	17	12	29	July 25	C. M. C.	1
Private	J. W. Crick	18	11	29	Aug. 29	C. M. C.	1
Private	H. J. Sheldon	18	11	29	Nov. 8	C. M. C.	2
Private	G. F. Nye	21	8	29	July 20	C. M. C.	2
Private	S. Hock	16	12	28	July 20	C. M. C.	1
Private	T. A. Skinner	16	12	28	Oct. 24	C. M. C.	1
Private	J. T. Low, Jr.	17	11	28	Aug. 7	C. M. C.	1
Private	L. Swan	14	13	27	July 25	C. M. C.	1
Sergeant	J. M. Hancock	15	12	27	July 25	C. M. C.	1
Private	C. P. Graves	15	12	27	July 25	C. M. C.	2
Private	T. W. Mingay	17	10	27	July 25	C. M. C.	2
Private	C. H. Hallett	18	9	27	July 25	C. M. C.	1
Private	R. M. Campbell	19	8	27	July 25	C. M. C.	1
Private	L. B. Ackley	12	14	26	July 25	C. M. C.	1
Private	F. J. Brown	12	14	26	July 26	C. M. C.	1
Private	H. McBean	12	14	26	July 25	C. M. C.	1
Corporal	J. F. Kramer	14	12	26	July 26	C. M. C.	1
Private	C. F. McKenna	14	12	26	July 25	C. M. C.	1
Private	W. H. Woodbury	14	12	26	July 25	C. M. C.	1
Private	G. E. Pool	15	11	26	July 25	C. M. C.	1
Corporal	W. A. Philpott	16	10	26	July 26	C. M. C.	1
Private	O. Phillips	16	10	26	July 12	C. M. C.	1
Private	N. N. Benham	16	9	25	July 25	C. M. C.	2
Private	J. J. Hanrahan	17	8	25	July 26	C. M. C.	1
Private	H. A. Kellar	17	8	25	July 26	C. M. C.	1

Total 64

FORTY-THIRD SEPARATE COMPANY.

(Figure of merit..... 61.65.)

Rank.	NAME.	SCORES.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Private	G. H. Osborn	20	18	38	Aug. 31	.....	.....
Private	P. J. Duffy	16	17	33	Aug. 31	.....	.....
Private	A. Z. Peckham	16	17	33	Aug. 31	.....	.....
Private	L. W. Connsilman	14	18	32	Aug. 31	.....	.....
Private	C. M. Wagner	20	12	32	Aug. 30	.....	.....
Private	Charles Mudge	16	15	31	Aug. 31	.....	.....
Private	W. L. Clark	12	18	30	Aug. 31	.....	.....
Private	H. H. Lockwood	16	14	30	Aug. 31	.....	.....
Private	H. Harrison	18	12	30	July 6	.....	.....
Private	C. S. Cooper	16	13	29	July 5	.....	.....
Captain	C. G. Thynge	22	7	29	July 5	.....	.....
Private	F. C. Peckham	13	15	28	July 5	.....	.....
Private	A. S. Freeman	17	11	28	Aug. 31	.....	.....
Private	W. N. Hatch	19	9	28	Aug. 31	.....	.....
Private	L. Rockafellow	7	20	27	Aug. 30	.....	.....
Private	G. D. Miles	18	9	27	July 5	.....	.....
Private	E. F. Kruse	13	13	26	Aug. 30	.....	.....
Private	E. N. Yates	13	13	26	Aug. 30	.....	.....
Private	E. M. Gould	15	11	26	July 5	.....	.....
Private	A. J. Hastings	15	11	26	Aug. 31	.....	.....
Corporal	J. J. Nichols	18	8	26	Aug. 31	.....	.....
First Lieut	H. F. Lee	15	10	25	July 6	.....	.....
Private	M. D. Chaffee	15	10	25	July 6	.....	.....
Private	D. C. Conklin, Jr.	16	9	25	July 5	.....	.....
Private	P. L. Krotts	16	9	25	July 6	.....	.....
Private	E. W. Pierce	16	9	25	Aug. 31	.....	.....
Private	E. Wiley	16	9	25	Aug. 31	.....	.....
Q. M. Sergt.	J. E. Galligher	17	8	25	July 6	.....	.....
Private	T. Surdivan	17	8	25	July 6	.....	.....
First Sergt	L. T. Mudge	18	7	25	July 6	.....	.....

Total 30

FORTY-FIFTH SEPARATE COMPANY.

(Figure of merit.....)

Rank.	NAME.	SCORE.			Date of qualification.	If in match, state what.	Previous qualifications.
		200 yards.	500 yards.	Total.			
Captain	B. E. Miller	18	11	29	Sept. 29	.....	.....

Total 1

EXTRACT FROM GENERAL ORDERS No. 8, SERIES OF 1885,
GENERAL HEADQUARTERS, S. N. Y.

“Companies which fail to parade at least fifty per cent of their strength for class and forty per cent for volley and skirmish practice, will be published in orders as delinquent.”

ORGANIZATION.	Commanding officer.	Strength at last inspection.	Number practicing class.	Number practicing volley and skirmish.
Company F, Eighth Regiment.....	Captain K. Neffel.....	50	13	7
Company E, Ninth Regiment.....	Captain S. E. Japha.....	55	22	18
Company K, Ninth Regiment.....	Captain J. N. Billings.....	60	20	19
Company D, Tenth Battalion.....	Captain E. V. Denison.....	52	17	25
Company A, Eleventh Regiment.....	Captain F. Albrecht.....	86	20	11
Company B, Eleventh Regiment.....	Captain G. W. Mooney.....	73	29	24
Company C, Eleventh Regiment.....	Captain T. F. Schmidt.....	68	30	22
Company D, Eleventh Regiment.....	Captain F. Klonz.....	67	22	14
Company F, Eleventh Regiment.....	First Lieut. R. A. Denahn.....	42	16	13
Company G, Eleventh Regiment.....	Captain J. M. Rankin.....	47	12	9
Company H, Eleventh Regiment.....	Captain C. H. Collins.....	47	8	5
Company I, Eleventh Regiment.....	Captain C. F. Surburg.....	63	17	11
Company K, Eleventh Regiment.....	First Lieut. H. Christiansen.....	51	23	17
Company E, Twelfth Regiment.....	Captain F. Roosevelt.....	48	20	9
Company I, Twelfth Regiment.....	Captain H. C. Aspinwall.....	46	18	7
Company I, Thirteenth Regiment.....	Captain G. G. Cochran.....	50	40	10
Company C, Fourteenth Regiment.....	Captain B. S. Steen.....	48	18	9
Company D, Fourteenth Regiment.....	Captain H. Nutt.....	66	23	10
Company E, Fourteenth Regiment.....	Captain J. R. K. Barlow.....	50	12	.....
Company F, Fourteenth Regiment.....	Second Lieut. T. D. Henry.....	46	17	.....
Company G, Fourteenth Regiment.....	Captain E. Bennett.....	53	22	12
Company H, Fourteenth Regiment.....	Captain John Cutts.....	48	11	9
Company I, Fourteenth Regiment.....	Captain A. O. Crane.....	50	27	15
Company D, Twenty-second Regiment	Captain W. H. Cortelyou.....	37	16	10
Company E, Twenty-second Regiment	Captain N. B. Thurston.....	89	49	28
Company F, Twenty-second Regiment	Captain C. A. DuBois.....	39	26	13
Company G, Twenty-second Regiment	Captain G. F. Demarest.....	48	29	13
Company H, Twenty-second Regiment	Captain G. F. Potter.....	67	32	20
Company I, Twenty-second Regiment	Captain J. P. Leo.....	49	24	16
Company K, Twenty-second Regiment	Captain G. E. B. Hart.....	41	19	12
Company E, Twenty-third Regiment..	Captain C. F. Guydon.....	55	33	12
Company K, Twenty-third Regiment..	Captain D. R. Aldridge.....	90	64	23
Company A, Thirty-second Regiment..	Captain G. H. Bishop.....	36	17	10
Company C, Thirty-second Regiment..	Captain E. Broggelwirth.....	56	24	26
Company D, Thirty-second Regiment..	Captain E. J. McGlyn.....	62	27	22
Company H, Thirty-second Regiment..	Captain W. F. Grotz.....	50	19	12
Company I, Thirty-second Regiment..	Captain C. Schoenick.....	40	12	8
Company K, Thirty-second Regiment..	Captain M. C. Burger.....	28	16	8
Company A, Forty-seventh Regiment..	Captain F. J. Veritzan.....	49	30	14
Company B, Forty-seventh Regiment..	Captain A. A. Doughty.....	45	29	12
Company G, Sixty-fifth Regiment.....	Captain J. B. Rawson.....	48	22	11
Company A, Sixty-ninth Regiment.....	Captain M. Brennan.....	83	31	9
Company B, Sixty-ninth Regiment.....	Captain James Conlon.....	90	31	10
Company C, Sixty-ninth Regiment.....	Captain D. C. McCarty.....	83	36	14
Company D, Sixty-ninth Regiment.....	Captain M. Cox.....	100	21	11
Company E, Sixty-ninth Regiment.....	Captain H. Coleman.....	101	15	8
Company F, Sixty-ninth Regiment.....	Captain T. Mortimer.....	93	27	14
Company G, Sixty-ninth Regiment.....	Captain S. P. Ryan.....	94	23	7
Company H, Sixty-ninth Regiment.....	Captain P. J. Morgan.....	100	24	8
Company I, Sixty-ninth Regiment.....	Captain J. G. Cunningham.....	78	13	7
Company K, Sixty-ninth Regiment.....	Captain John Ker.....	89	26	11
Company I, Seventy-first Regiment.....	.....	48	12	8
Company C, Seventy-fourth Regiment	Captain C. L. Abell.....	43	18	9
Company E, Seventy-fourth Regiment	Captain F. N. Farrar.....	53	22	10
Company G, Seventy-fourth Regiment	Captain Peter Paulus.....	44	15	8
Twelfth Separate Company.....	Captain Jos. Egolf.....	89	38	33
Fifteenth Separate Company.....	Captain B. Myers.....	63	24	25
Twenty-fifth Separate Company.....	Captain John Raines.....	31	No pra	etice.
Twenty-eighth Separate Company.....	Captain J. H. Remmer.....	71	No pra	etice.
Thirty-first Separate Company.....	Captain A. J. Budlong.....	65	30	.....

EXTRACT FROM GENERAL ORDERS No. 8— (*Concluded*).

ORGANIZATION.	Commanding officer.	Strength at last inspection.	Number practicing class.	Number practicing volley and skirmish.
Thirty-sixth Separate Company.....	Captain A. A. Yates.....	64	28	19
Thirty-seventh Separate Company....	Captain G. W. Marlette.....	69	48	.....
Forty-first Separate Company.....	Captain J. G. Butler.....	75	47	.....
Forty-fourth Separate Company	First Lieut. J. Cummings, Jr.	73	No pra	ctice.
Sixth Battery.....	Captain L. L. Olmstead	68	43	.....

CHAS. F. ROBBINS,

Brig.-Gen. and Gen. Insp. Rifle Practice, S. N. Y.

(I.)

REPORT OF THE SURGEON-GENERAL.

NEW YORK, *May* 22, 1889.

SIR.—The complete establishment of the State Camp and of its perfect sanitary condition, as exemplified by the continued absence from it of any illness that can be attributed to a want of sanitation, has reduced the medical report in this especial respect to merely a perfunctory act. There is, however, another and an important subject to which I desire to call your attention, viz.: the introduction into the guard of the system of special training preparatory to rendering “prompt aid to the injured.” The system contemplates the extending of aid to the unfortunate citizen who may suffer from the effects of physical violence received in the daily walks of life, as well as to the national guardsman who may fall while in the line of his special duty. It is not necessary for me to do more at this time than to call your attention to the plan as was proposed and as it is now being carried into effect. This is done, however, for the purpose of refreshing the memory regarding some of the official duties, which you very wisely considered necessary for the fulfillment of the plan. The order calling for the “details” has been complied with in nearly every command of the first and second brigades. The medical officers of these brigades report that the members of the corps are attentive, often enthusiastic, and, with but few exceptions, have made such a degree of advancement in the special studies as to entitle each of them to the badge of proficiency presented by the State. In some of the regiments the desire to become a member of the corps causes a degree of friendly strife for the opportunity. This bespeaks great appreciation of the efforts of the State and of the medical officers of the respective commands. This enthusiasm is indeed a healthy sign, since it is expressive of the increased desire for knowledge that always portends intelligent action under all

circumstances. The Sixty-ninth regiment has not, until quite recently, as I am informed, taken the steps necessary to comply with the full import of the orders bearing on this question, but I feel quite sure that the report for the present year will show it to be entitled to an equal share of the commendation bestowed upon the other organizations of the First brigade. The commandants of the Third and Fourth brigades are not entitled to the same respectful commendation for the appreciation of the importance of the service, and of compliance with orders relating thereto, as is due to the commandants of the First and Second brigades.

The instruction of the "details" (when made) in the former organizations is due more to the assiduity of the medical officers than to the vigilance of their superiors. The proficiency of the members of the corps of the First and Second brigades has been ascertained by the board of medical examiners, appointed by the brigade commandants, in the manner indicated in orders from headquarters. Those who were found proficient have been presented with a suitable badge which identifies the wearer and also testifies to his ability to apply the principles that were taught him for the relief of his fellow men. The members of the Third and Fourth brigades, who have been properly taught in the essentials, have not been presented the badge to which they are entitled, because the commandants of these brigades have not complied with the portion of the order that makes it possible for the perspective members of the corps to pass the examination required to entitle them to the possession of a badge. I take this opportunity of making the foregoing statements that you may be informed as to the relative efficiency and vigilancy of the members of the respective brigades of the State in this respect. Important questions now present themselves to the consideration of all who value consistency of purpose throughout, in connection with the ownership of the badges bestowed on competent members of the so-called ambulance corps. Should these badges become the property of the men to whom they are presented, irrespective of the length of the time of subsequent service in the guard; or should they be the property of the regiment, the holders being the custodians of them at the pleasure of the regiment? As the matter stands at the present time they are—by implication at

least — the property of the parties to whom they were presented by the State on the recommendation of the examining board. It seems to me that this is an unwise plan — a plan that may lead to animadversion, if not to just condemnation. These badges are presented by the State as an indication of special fitness of the wearer to aid (1) the unfortunate members of the guard who may become the recipients of physical violence while in the line of their legitimate military duty; (2) to aid those citizens who may incidentally fall beneath their notice in civil life. The former duty is plainly the only one that is consistent with the expenditure of the money of the State for the special decorations indicative of it. However, I am not as yet prepared to submit a plan that can be said to fulfill all the indications. I hope soon, however, after due consultation with the medical officers of the department, to be able to recommend a course that will be unobjectionable in all respects, and will be indicative of the continued advancement of the members in the study of the duties of this service after they shall have severed their connection with the military service of the State.

I deem it now time to call attention to the importance of having at the disposal of the military authorities at least two suitably constructed and equipped ambulances. These vehicles can be kept in the arsenal and can be issued when the need for them is apprehended. It seems to me unwise to depend entirely on the civil authorities for ambulance transportation, since they may find their resources severely tried on certain easily understood occasions, and thereby be rendered unable to afford that attention and security to the citizen soldier that he has the right to exact from the hands of the authorities he serves. I trust that you will give this suggestion your early and earnest attention. Another fact of seeming importance has attracted my attention frequently, and requires, in my judgment, an early correction. It is now, and has been, a practice for a long time in many organizations of the guard to issue "turned in" uniforms to recruits. While it is advisable, perhaps, to ask a recruit or even an old soldier under peculiar circumstances to step into "others' shoes" or the "turned in" uniforms of their antecedents, still it must be admitted, at the same time, that these clothes ought to be in a suitable cleanly condition. My observation while an active member of a regiment, as well as since that time, has taught me that recruits and others

in the service are clothed not infrequently in the second-hand habiliments of their predecessors, and that these habiliments are frequently out of repair and even offensive to more than one of the special senses by reason of the often unavoidable results of the exigencies of the service. From a sanitary standpoint, if from no other, this abuse should be corrected at once. Once-worn uniforms should be cleaned and repaired by the proper authorities before being issued again. A course of this kind will be found to be healthy and ennobling for the men, and at the same time economic and consistent for the State.

Permit me in concluding this brief report to thank yourself and others with whom I have been brought in official contact during the last years, for the unvarying courtesy that has been extended to me at all times.

Respectfully submitted.

JOSEPH D. BRYANT,

Brigadier and Surgeon-General, S. N. Y.

TO JOSIAH PORTER,

Major-General and Adjutant-General, N. G. S. N. Y.

(J.)

REPORTS OF COMMANDING OFFICERS OF FIRST AND FOURTH BRIGADES.

HEADQUARTERS FIRST BRIGADE, N. G. S. N. Y.,
No. 6 PINE STREET,
NEW YORK, *November 30, 1888.* }

Adjutant-General State of New York, Albany, N. Y.:

SIR.—In accordance with P. 591 R., I have the honor to submit the following report of the First Brigade, N. G. S. N. Y.:

MOVEMENT OF TROOPS.

On May thirtieth the brigade made the usual Memorial Day parade under my command as participants in the commemoration ceremonies and as escort to the Grand Army of the Republic.

On October nineteenth the brigade paraded in the city of New York, in connection with the Second Brigade, N. G. S. N. Y., under the personal command of the Commander-in-Chief, and at the close of the parade paid to him the honors of a marching salute.

The following regiments of the brigade were present at State camp in accordance with General Order No. 8, General Headquarters, April 13, 1888: The Eighth, Eleventh and Sixty-ninth regiments, and parts of the First and Second batteries.

All of the regiments performed the usual duty at Creedmoor.

STRENGTH OF THE BRIGADE.

The aggregate strength of the brigade by the quarterly return dated September 30, 1887, was 5,514. The strength for the corresponding quarter this year is 5,717, a gain of 203.

INSTRUCTION.

The armory board of the city of New York having assigned to the use of the brigade commander the quarters formerly occupied by the Second battery, a school for the instruction of the officers

of the brigade in sword exercise, mounting drill, pistol practice and tactics was established there on September seventeenth, and has been generally well attended.

This school seems to have solved the problem of the proper instruction of officers in duties not immediately connected with their commands, and promises to have far-reaching results. The brigade commander desires in this connection to express his appreciation of and thanks for the assistance received from Lieut.-Col. Heman Dowd, Twelfth regiment, Lieut.-Col. James A. Dennison, Seventy-first regiment, and First Lieut. William R. Hamilton, U. S. A., who have given most interesting and instructive lectures to the officers.

The extra expense of this school has been provided without cost to the State, and if an appropriation of a moderate amount could be made for its support, the scope of its usefulness might be extended very materially with corresponding benefit to the service.

SIGNAL CORPS

During the year a signal corps has been organized and attached to brigade headquarters; it consists at present of a captain and twenty-four enlisted men, who are thoroughly instructed in the school of the soldier and of the company, and in all branches of signaling and telegraphy. In addition, they have provided themselves with horses and equipments, and act as a mounted escort to the brigade commander on parades. Major E. C. Stanton, the brigade signal officer, and First Sergeant D. S. Thompson, are entitled to the highest commendation for their devotion to the work of bringing this corps to its present degree of efficiency.

AMBULANCE CORPS.

In pursuance of orders from general headquarters an ambulance corps, consisting of details from each regiment and battery, has been organized, and has been instructed by their respective medical officers in the "first aid to the injured." Details from this corps have been detached on occasions of parades, provided with ambulances, stretchers and all the articles necessary for their service, and have made a very effective appearance. The assistance rendered by Major Robert V. McKim, surgeon of the brigade, in organizing this corps, is noted.

INSPECTION.

The brigade commander renews his recommendation of last year that the official inspection of the troops should take place in the spring instead of the autumn, and begs to add thereto the further recommendation that all such inspections should take place in the day time and out of doors, where something more than the mere wearing of the uniform and the answering to roll-call can be observed and commented upon. The in-door inspection produces better results so far as numbers are concerned, but can give the inspecting officer very little idea of the efficiency of the troops.

PARADE-GROUND AND RIFLE-RANGE.

In 1883 the brigade commander, being one of the commissioners appointed by the Legislature to select and locate lands for public parks in the Twenty-third and Twenty-fourth wards, and the vicinity thereof, assisted in securing the selection of the Van Cortlandt estate as one of such parks, and the provision in that park of a parade-ground and rifle-range for the use of the National Guard. The commissioners, in their report to the Legislature, say: "The National Guard will, for the first time in their history, have at their command a space sufficient for their proper education in the practical duties of a citizen soldier. They have for years been dependent upon the courtesy of the Brooklyn authorities on the occasion of special parades, and every effort which has been made to supply this deficiency has been unsuccessful. When the Central park was laid out, it was understood that an ample tract would be set apart for their use; but the pledge, whether given, or merely implied, was never kept, nor indeed was there any adequate space within its drives and walks for military evolutions on a large scale. By special enactment a piece of land in another locality was appropriated, but the law was subsequently repealed, and their claims have ever since been systematically ignored. It is to be hoped that the present opportunity to make amends for this unworthy treatment will not be neglected. We owe at least this return to that efficient and excellent organization, which is ever ready, when danger threatens the good order and peace of society, to risk the lives of its members for the protection of life and property, and whose name is a tower of strength and a defense."

This parade-ground will comprise about 120 acres, and in addition thereto a piece of ground suitable for and large enough to make the best rifle-range in the country has been provided. The title to the property will probably vest in the city of New York before the close of the year, and the brigade commander has requested the park department to secure the necessary funds to prepare the property for the use of the National Guard in the coming spring, and he has appeared before the board of estimate and apportionment of the city of New York to urge that such appropriation shall be made.

ARTILLERY.

The Adjutant-General of the army of the United States, having suggested that the National Guard in the seaboard cities should be instructed in the defense of fortification and the use of heavy guns, the brigade commander requests authority to raise a regiment of twelve companies, to be known as "The First New York Heavy Artillery," which, while subject to the other usual military duties, shall be especially charged with the knowledge of and practice in this branch of the service. Such a regiment can be readily recruited and officered, and, with the assistance of officers of the regular army stationed at the forts in the harbor, can easily acquire such proficiency in the matters indicated as to become a very valuable and efficient protection from a foreign foe.

IN GENERAL.

The general condition of the command is good, and with one or two exceptions the regiments and batteries show some improvement over last year. In searching for the causes of such exceptions, the commanding general discovers matters of so much importance that he deems it his duty to make them known through the means of this, his annual report.

The present system of enlistment has, wherever carried out strictly, been hurtful to what may be called company sentiment. Under the present plan a captain can enlist anybody he pleases, and, animated by a desire to make as good a showing of numbers as possible, he is too often disposed to enlist members without regard to their circumstances, or to their ability to perform military duty. The members of the company, having lost their right of choice by election, do not know the new men with whom

they are to associate, and the result is that there is no bond of union or comradeship between them. The enlisted man, finding that he gets his uniform for nothing, commits himself too hastily to the performance of military duty, gets very soon tired of it, and disappears, not only from the control, but actually from the knowledge of the commanding officer. In one regiment alone there was at one time more than one hundred men on the rolls, who could not be found at their given addresses, and the great difficulty now felt in some regiments is the inability to collect dues and fines, and otherwise enforce the performance of duty. By the present plan the city is put to the expense of providing armories and the State provides arms, equipments and uniforms for men who often perform but little of the ordinary duty, and when the emergency arises to call them into service, can not be found. The National Guard duty is of a necessity voluntary; men can not be enlisted by force, nor, from the very nature of the service, can they be compelled to perform their duty, and in a great city like New York a man may, by a mere change of residence, lose his identity.

A remedy for this, in the judgment of the brigade commander, is that the right of a company to select its own members and comrades should be restored; that the theory of making the cost of membership in the National Guard nothing be abandoned, and the practice of it abolished. Let the city furnish suitable armories for its troops, as is now proposed; let the State furnish the arms, equipments and a simple uniform, consisting of a cap, blouse and trousers, and let the man provide, at his own expense, all the rest. It has been shown by experience that if a man does not care enough to become a member of the National Guard, to be willing to spend something for a handsome uniform, and for the support of his company and his regiment, he does not make a good national guardsman, and is of no use to the city or State.

It has been suggested that enough young men in the city of New York can not be found who are willing to devote their time to military duty if it cost anything, and that it is necessary to give them their uniforms and everything else to induce them to enlist. If this is so, it would be better to pay every member of the National Guard a small sum for the services rendered, the aggregate of such payment being enough to reimburse him for his outlay for uniform, etc., and, taken in connection with the sum

expended for the original outfit, would not cost the State more than at present, while the money expended, under the direction of and in accordance with the taste of each organization, would produce very desirable results in the shape of handsome and distinctive uniforms.

Very respectfully.

LOUIS FITZGERALD,

Brigadier-General.

HEADQUARTERS FOURTH BRIGADE, N. G. S. N. Y., {
BUFFALO, N. Y., *February 1, 1889.* }

Adjutant-General State of New York, Albany, N. Y.:

SIR.—Pursuant to 589 R. I beg to submit the following report for this brigade:

According to quarterly return for September 30, 1888, the strength of this brigade was:

Commissioned officers.....	130
Enlisted men.....	1,902
Total	2,032

or a gain during the year of ninety-three.

In my judgment this brigade has steadily increased in efficiency and military strength.

In addition to regular tours of duty in camp as per orders, the Fifth Battery attached to this brigade, made a march of about seventy-five miles leaving Syracuse September seventeenth and continuing five days. This tour was supervised by Lieutenant W. R. Hamilton, U. S. A. I am satisfied that most important results were obtained from this march in discipline, target practice and in practical military duties. I am led by this experiment to recommend the massing of the various organizations of this brigade not ordered into camp during the summer of 1889 or such of them as it may be desirable, in a marching movement occupying five or six days, for study of the practical duties and of manœuvres in strange territory and under my command. The troops to make and strike camp, prepare food and assume all the duties of a brigade in motion on a war basis, such movement to occur in the early autumn after crops are harvested. It would be

my desire to have a competent army officer assigned to inspect and instruct practically during such movement. I respectfully urge this to your earnest attention as the only means of training men to the practical side of military life and at the same time giving staff officers the practice which can not be attained in any other way.

On the fourteenth of January, 1888, upon the requisition of the mayor of Jamestown, the Thirteenth Separate Company was ordered under arms to assist in the preservation of the peace, and remained on duty from 3 A. M. of that day until 11 A. M. January sixteenth, when the trouble was adjusted and the men were dismissed without actively participating in any movement. The response of the men to the summons was prompt and cheerful, and during the tour of duty excellent discipline prevailed, reflecting credit upon officers and men. This company has during the past year recruited most excellent material and promises to be one of the most efficient companies in this brigade.

I desire to call your attention to the desirability of a yearly allowance to commissioned officers for uniforms. The regulations require a uniform which is a severe financial tax on many worthy young men, and hence, in my judgment, many officers are lost to this service who are well equipped mentally for the work, by sheer inability to purchase and maintain a uniform. Regulations, too, change very often, requiring additional expenses to conform, of which the many changes in officers' overcoats may be cited in point. With additional work required of officers in camp or other continuous duty, a uniform can not possibly serve more than five years; hence an amount should be allowed equal to the original cost every five years of service.

The State service uniform for enlisted men, has, in my judgment, increased in favor, and every effort to have it made in some measure distinctive has proved a failure. In all massing of troops, as for instance at camp or in the Philadelphia parade, I deem this element of the highest importance, enabling our separate companies to be organized into homogeneous regiments on short notice, or into a brigade without the invidious comparisons sure to follow from distinctive uniforms. I am convinced that thereby one spirit pervades all organizations to do credit to the State, instead of the more local one to do credit to their own

organization. The uniform as at present constituted is well adapted to its purpose, especially since the issue of blouses and blue overcoats.

I also desire to recommend that an effort be made to organize one battery of heavy artillery at least, in this brigade, covering as it does a long stretch of lake and river front on our northern frontier. My reasons for this recommendation are too apparent to be discussed at length. Such a movement will receive my hearty support.

The great value of the State camp of instruction to all officers and men ordered there is becoming more and more pronounced, in my judgment, but the good work done there should be supplemented by a summer school of instruction for officers. In my judgment the instructions given officers during the necessarily short tour of duty, only once in two years, is not sufficient, for that is the only instruction that can be given wherein the practical and theoretical can be combined. Such a school for officers, not ordered for camp duty, should be held during the progress of the camp, and instruction given by the army officers detailed there, or such as would gladly avail themselves of such an opportunity to serve the cause.

I desire to urge upon your attention the issue of some badge for long and meritorious service in the forces of the State. I think such a badge would be a trophy highly prized by all good men, and would stop the disfigurement of uniforms by the use of service stripes.

I have, general, the honor to be yours with respect.

PETER C. DOYLE,
Brigadier-General.

(K).

REPORT OF GENERAL J. G. FARNSWORTH

ON THE

Condition of the War Claims of the State against the United States, December 31, 1888.

ALBANY, N. Y., December 31, 1888.

To the Adjutant General, State of New York:

SIR.—I have the honor to report that, during the past year, there has been received from the United States, and paid into the treasury of the State, on account of expenses incurred by the State in raising troops for the general government during the war of the rebellion, the sum of \$67,702.05, leaving an unsettled balance of \$1,010,873.30. The work of obtaining additional proofs and preparing further explanations to remove the objections and meet the requirements of the accounting officers of the United States treasury, and the prosecution of the war claims generally, is going forward unremittingly, with confident expectations of favorable results in obtaining further allowances for the State. A bill, now pending in Congress, for the modification of the rules governing the accounting officers of the treasury is expected to pass during the present session. If it becomes a law, many claims now suspended, disallowed and not recognized as coming under the provisions of the act of Congress of July 27, 1861, will be admitted, taken up and allowed.

The bill for refunding the direct tax levied in 1861, which passed the Senate early last session of Congress, and recently passed the House of Representatives with amendment, is now again before the Senate pending its action on the amendment. As soon as this is disposed of the bill will be sent to the President for his consideration and final action. In view thereof I have prepared and laid before him a brief containing a full statement of the levying,

collection and settlement of the tax, so far as this State is concerned, with reasons why it should meet with his approval. The amount due the State, under the provisions of the bill, is \$2,213,330.86.

A bill for refunding duties paid by the State on arms imported in 1863 amounting to \$42,706.87, has been favorably reported in the House of Representatives, and I have reason to hope will pass during the present session.

Bills are also pending in Congress for payment of interest due this and other States, for readjustment of interest due on account of the war of 1812, and for the payment of certificates issued by the State to the soldiers of 1812.

I have made application to the Secretary of the Treasury to refer to the United States Court of Claims the suspended claim for interest paid by the State on Comptroller's bonds issued in 1861 to provide for the expense incurred in raising troops for the United States service. A full statement of the case, together with briefs and other papers heretofore filed with the accounting officers of the treasury and the Attorney-General of the United States, accompany the application. The amount of this claim is \$131,188.02. It has been admitted by the Attorney-General to be a just charge against the United States, and the only reason given for its suspension is that it was not considered to come under the provisions of the act of Congress of July 27, 1861. If the application is granted, and the claim referred as a question, I believe it will receive favorable consideration from the Court of Claims.

A detailed statement of the condition of the war claims is hereunto annexed.

Very respectfully

Your obedient servant.

J. G. FARNSWORTH,

In Charge War Claims.

WAR CLAIM ACCOUNT.

THE UNITED STATES IN ACCOUNT WITH THE STATE OF NEW YORK.

To claims filed as follows :

1862.	<i>Dr.</i>	
May 22.	Amount of first installment.....	\$2,782,688 42
July 31.	Amount of second installment.....	167,791 04
1867.		
Dec. 2.	Amount of third installment.....	281,845 86
1872.		
Jan. 2.	Amount of fourth installment	364,107 07
Sept. 2.	Amount of fifth installment.....	866,413 13
1873.		
Dec. 3.	Amount of sixth installment.....	341,580 10
1874.		
June 27.	Amount of seventh installment.....	197,537 76
1877.		
June 23.	Amount of eighth installment.....	21,956 11
1883.		
Oct. 3.	Amount of ninth installment.....	77,954 30
Total.....		<u>\$5,101,873 79</u>

1861.	<i>Cr.</i>	
July 31.	By cash for carbines purchased, etc.....	\$45,371 11
Sept. 17.	By cash.....	1,113,000 00
1865.		
Sept. 27.	By cash.....	262,763 17
1867.		
June 4.	By amount credited to the State on account of direct tax.....	879,058 22
1870.		
Sept. 23.	By amounts credited to the State as follows:	
	On account of Quartermaster's department..	41,220 83
	On account of Ira Harris Hospital.....	702 90
	On account of direct tax.....	37,260 72
1871.		
May 25.	By amount credited to the State on account of direct tax.....	194,799 15
June 27.	By amount credited to the State on account of direct tax.....	348,295 50

1872.	
Dec. 10.	By amount credited to the State on account of direct tax..... \$272,687 02
	By sales of property..... 1,092 50
	By cash..... 192,650 31
1873.	
May 17.	By cash..... 107,498 08
1875.	
Dec. 21.	By amounts credited to the State as follows:
	On account of direct tax..... 81,230 25
	On general account..... 640 03
1876.	
Nov. 27.	By amount credited to the State on account of Surgeon-General's department..... 24,336 80
	By cash paid into the treasury of the State.. 56,407 77
1877.	
June 23.	By cash paid into the treasury of the State.. 41,138 50
1878.	
April 18.	By cash paid into the treasury of the State.. 82,736 78
1879.	
May 22.	By cash paid into the treasury of the State.. 20,539 42
July 30.	By cash paid into the treasury of the State.. 23,809 53
Nov. 24.	By cash paid into the treasury of the State.. 17,510 00
1880.	
Aug. 5.	By cash paid into the treasury of the State.. 21,421 13
1882.	
Jan. 5.	By cash paid into the treasury of the State.. 83,344 35
1884.	
April 7.	By cash paid into the treasury of the State.. 54,946 52
1886.	
Aug. 18.	By cash paid into the treasury of the State.. 18,837 85
1888.	
Feb. 15.	By cash paid into the treasury of the State.. 22,559 84
April 11.	By cash paid into the treasury of the State.. 38,079 10
Nov. 15.	By cash paid into the treasury of the State.. 7,063 11
	By unsettled claims..... 1,010,873 30
Total.....	
\$5,101,873 79	

(L.)

REPORT ON MARCH OF FIFTH BATTERY BY COMMANDING OFFICER.

FIFTH BATTERY, N. G. S. N. Y.,
SYRACUSE, May 22, 1889. }

Adjutant-General, State of New York:

SIR.—In pursuance to instructions contained in your letter under date of May 16, 1889, I have the honor to make the following report:

In compliance to Special Order No. 94, General Headquarters, State New York, Series of 1888, a practice march of six days was made by this command, commencing September 17, 1888.

The battery was prepared as specified in Battery Order No. 8, Series of 1888 (hereby annexed), and marched from the armory in Syracuse promptly at 8:30 A. M. It consisted of six commissioned officers, sixty-three enlisted men, one civilian veterinary surgeon, six camp followers (or owners of teams who performed no duty), Lieut. W. R. Hamilton, U. S. A., who accompanied the command under instructions from the Adjutant-General's department, for the purpose of noting progress made and rendering assistance to the commanding officer.

The outfit consisted of two twelve-pounder Napoleon guns, two three-inch ordnance guns or rifles, four caissons, one baggage wagon, one ambulance and sixty horses.

Immediately after leaving the armory a halt was made of one hour to repair a broken pole and to set a horseshoe. This was the only accident which caused any delay during the entire march. Another short halt was made outside the city limits to water horses, and to adjust the harnesses and saddles. The battery then marched to Cicero, a small hamlet, arriving there at 12 o'clock, M.; distance, eight miles from the armory. Horses doing nicely, but somewhat fretty. Here the battery went into park,

unharnessed, fed and took dinner, and at 2:30 P. M. took up its line of march to Fort Brewerton, distance four miles; arrived there at 4 P. M. in a drenching rain. The location of the camp selected is a large meadow on the banks of the Oneida river near the outlet of Oneida lake and opposite the ruins of old Fort Brewerton. On this historic spot our first camp was pitched, which we named in honor of Gen. Josiah Porter. Owing to incessant rain the horses were housed with neighboring farmers, which required nearly the entire command to perform stable guard duties. It also caused a relaxation of discipline in the command for the time being.

September 18.—After passing an uncomfortable night in the rain the reveille was sounded and morning gun fired at 5 A. M. No response to sick call. Breakfast at 7 A. M. Boots and saddles at 8 A. M. Struck camp and after firing two rounds of blank ammunition by battery we left Brewerton at 9 A. M. in comparatively good shape. Crossing the river into Oswego county and over a heavy road we arrived at West Monroe at 12 M., distance six miles. Parked the battery, fed the horses on picket line without unharnessing, and took dinner at the hotel. After dinner one hour's mounted drill, including blank firing; horses behaving nicely. Left West Monroe at 3 P. M., weather good, roads good. Arrived at Cleveland at 6 P. M., distance twelve miles. Camp W. R. Hamilton was pitched on the outskirts of the village in a large open lot. Men and horses becoming accustomed to their work, and are doing well. A few horses slightly galled, but are receiving the best medical treatment.

September 19.—Reveille at 5 A. M. Command left camp at 8:30 A. M. and marched eleven miles to Sylvan Beach, arriving there at 12 M., and immediately went into camp (Camp Doyle). The balance of this day was devoted to target practice. The targets consisted of oil barrels painted white and were anchored in the lake at a distance respectively of one-half mile for twelve-pounder Napoleon firing solid shot, and one mile for three-inch rifle, firing Amsterdam case shot without fuse. About forty shots were fired at each target, most of them with a remarkable degree of accuracy. Records of the shot, were kept by Lieutenant Hamilton, and of which I have no copy. Some of the firing was done with electric primers, and the use of the same taught to several of the officers and non-commissioned officers of the battery.

September 20.—Reveille at the usual hour. To avoid a long and circuitous route and for the purpose of instruction, the battery at this place crossed Wood river by a small rope ferry, capable of carrying only one carriage at a time. The teams were unhooked and the carriages moved on and off the ferry by hand. The landing was made without mishap and the crossing of the entire command made in thirty minutes. A march of five miles was then made through the woods, and on the lake shore without regular roads to Lakeside, arriving there about 11 A. M.; established Camp Varian (a slightly location overlooking the lake) and devoted the balance of the day to mounted drills, target practice, and blank firing. The target practice this day was not so accurate as the day previous, which was owing to the targets being anchored at unknown distances. However, after the ranges were obtained the firing was of better execution. About sixty-five shots were fired, equally divided between the twelve-pounder and the three-inch rifle; also, fifteen rounds of canister were fired at short range on the water with the twelve-pounder, demonstrating to the men the terrific effect of this ammunition on an enemy at close range. It was afterward ascertained that the distance of the targets fired at this day was from one to two miles. This practice was done with the teams hooked and in regular line. A mounted drill of two hours completed this day's work.

September 21.—Reveille at 5 A. M. Broke camp at 7 A. M., and marched to Chittenango to dinner, distance eleven miles. Parked the battery and fed horses in the village street, leaving there at 2 P. M. for Manlius, distance seven miles. This march was by far the hardest pull for the teams on the whole trip. Two additional teams had to be hired to help the baggage over a steep mountain. The march, however, was successfully made, reaching Manlius at 5 P. M., where the battery went into camp on the grounds of St. John's Military Academy and named it Camp Phelps. During the evening a social visit was made to the camp by the officers in charge of the academy, and returned by the officers of this command the following morning.

September 22.—Reveille at 5 A. M. The morning gun fired from the academy grounds was answered with four guns from this battery, fired simultaneously with the electric primers. Battery started sharp at 7 A. M., and after two hours mounted drill on the village fair grounds proceeded on its way to Syracuse, halting at

Fayetteville thirty minutes to wash the carriages, arriving at noon at the suburbs of the city, where the battery parked and fed. After dinner a two-hour mounted drill and march to the armory, arriving there at 6 P. M., distance from Manlius ten miles.

The habitual order of march was in column of sections, except when the roads admitted, platoons were formed.

The guard detail, made daily, consisted of one battery officer of the day, two non-commissioned officers and twelve privates; three sentries were posted at the picket line and park, and one in camp.

The camp equipments used for the entire command were six hospital and two wall tents.

Rations and forage were contracted for in advance; meals were furnished at country taverns, and forage, straw and fuel delivered at the park.

During the entire march there were but two men excused from duty, one day, on account of sickness.

The most remarkable feature of the expedition was the manner in which so many untrained horses adapted themselves to this new work. The second day out the majority of them knew the meaning of the stable call, and every subsequent day thereafter a marked improvement of the horses, both in learning and their condition, could be easily observed.

Discipline among the men was fairly good. All orders issued were promptly and cheerfully executed, there being no occasion for punishment.

The successful result of this march leads me to believe that a National Guard light battery under a fair degree of instruction, properly armed and equipped, notwithstanding the untrained horses, can be made serviceable for the field at three days notice; and, while trained horses are of the utmost importance to a battery, my experience teaches me that well-trained drivers, men selected from the best material, noted for good, sound judgment, are of greater importance. The former we can not have, but the latter we can. Ample facility should be extended to the batteries so as to admit of the hiring of horses two evenings in each month for drivers' drill and instruction.

In conclusion, I desire to express my sincere thanks to Lient. W. R. Hamilton, U. S. A., for many favors shown to myself and command; he was ever ready to extend a helping hand and kindly advice. To him is attributable a great share of the successful

result of the six days experimental march of the Fifth Battery around the shores of Oneida lake.

Trusting that our efforts may redound to the benefit of the mounted service of the National Guard, I have the honor to remain

Very respectfully your obedient servant.

MICHAEL AUER,

Captain and Brevet Major Commanding Fifth Battery, N. G. S. N. Y.

FIFTH BATTERY, N. G. S. N. Y., }
SYRACUSE, N. Y., *August 31, 1888.* }

BATTERY ORDER }
No. 8. }

In pursuance to orders from General Headquarters this command will parade for six days field duty, commencing Monday, September 17, and ending September 22, 1888.

All officers, non-commissioned officers, musicians and privates will report for duty fully armed and equipped, in fatigue uniform, according to law and regulations, at the armory in this city, at 6 o'clock A. M. September 17, 1888.

Knapsacks, containing extra linen, blankets and cleaning material and overcoats rolled and strapped on the top will be fastened to the ammunition chests of the caissons before 7 o'clock A. M.

No baggage aside from that contained in knapsacks will be transported.

By order of

MICHAEL AUER,

Captain Commanding Battery.

N. GREER,

First Sergeant.

(M.)

REPORT OF LIEUT. WM. R. HAMILTON, FIFTH UNITED STATES ARTILLERY.

1. ON MARCH OF FIFTH BATTERY—2. ON INSTRUCTION GIVEN TO OFFICERS IN FIRST AND SECOND BRIGADES.

NEW YORK, *September 24, 1888.*

To the Adjutant-General, State of New York, Albany, N. Y.:

SIR.—I have the honor to submit herewith my report of observation of the march of the Fifth Battery, N. Y. N. G.:

By virtue of letter received from Adjutant-General's office, dated Albany, September first, I put myself in communication with Captain Michael Auer, Syracuse, N. Y., commanding Fifth Battery, N. Y. N. G., and by his desire I left New York city on Friday, September fourteenth, and arrived at Syracuse during the night of the fourteenth-fifteenth. I inspected the arms, accoutrements, harness, equipments, pieces and ammunition, belonging to the battery on that day, and made such suggestions as seemed suitable regarding the packing of ammunition, and care and provision of all property. The conditions by which the march was made provided that the battery commander should hire all the animals and be responsible for them during their use. It was to me, therefore, considerable of a problem whether suitable horses for artillery purposes could be hired for any reasonable sum. But the battery commander soon proved to me that horses suitable could be hired on three days notice sufficient to fit out two or three batteries. The sum paid per team was from four dollars to five dollars per day. On Monday A. M., the seventeenth inst., horses were brought to the gun shed at 6 A. M. The drivers of the battery were ordered to report there at the same time, and from 6 to 8 A. M. the time was spent in fitting the battery harness to the animals, and teaching the drivers how to harness and hitch up. The cannoneers assembled at 7.30 A. M., and by

8.30 A. M. the battery, with almost an entirely new set of drivers, left the gun-shed and started on the march, but had not proceeded 100 yards before a pole broke and one of the team horses cast a shoe. By 9.30 A. M. these accidents were remedied and a fresh start made. There were, including the surgeon, six commissioned officers, sixty-three enlisted men, one hired veterinary surgeon, six teamsters and myself. The pieces were two twelve-pounder Napoleon guns and two three-inch rifled ordnance guns, each of which had its caisson. An ambulance and one baggage-wagon made up the train. No rations or forage were carried, as the battery commandant had made arrangements previously along the line of march for feeding of both men and animals. The baggage, therefore, consisted of six hospital tents, one for enlisted men of each of the four sections, and two for the officers, blankets, veterinary and surgical stores, etc. I learned from the battery commandant that forty of the sixty-three enlisted men were recruits, most of whom had joined since June first. The drivers, with the exception of three men, were recruits. The teamsters who followed with the train, were men who either owned or worked the horses, and went along solely to see that they were properly cared for. They performed no military or other duty, except to hitch up and drive the ambulance and baggage-wagon. The march through the city was made in an orderly and soldierly manner, and a half mile outside the city limits the first halt was made for the purpose of readjusting harness and watering horses. At 12.30 P. M., after a march of ten miles, the command halted for dinner. The harness was taken off and a rest of over an hour made. It required an hour to harness and hitch up again, but by 2.30 P. M. the battery was on the march. The roads were excellent, hard and level, and the course was nearly due north. At 4.30 P. M. the command reached Brewerton, at the foot of Oneida lake, and in the midst of a pouring rain went into park in a field covered with long grass. The horses were put in stables and afterward groomed and fed, and the men were marched to supper at the village tavern. It took the battery one hour and thirty minutes to park the pieces, put up the tents, unharness and groom and feed the horses. The rain fell heavily and steadily all through the night, but let up in the morning sufficiently to enable the battery to hitch up and get off in good style. The entire command, notwithstanding the dis-

couraging weather, was in good spirits, and over heavy roads eighteen miles were accomplished before making the halt for the night at Cleveland on the north shore of Oneida lake. The picket line was thrown around the caissons and horses fastened to it, and the entire command went into camp with much more dispatch and military action than the night preceding. On Wednesday A. M., the nineteenth, but eleven miles were made and the afternoon was spent at Sylvan Beach, engaged in target practice. The target was an ordinary vinegar barrel painted white and anchored accurately at a distance of three-quarters of a mile from the firing point. Eighty-four rounds were fired, half solid shot from the Napoleons and the other half case shot from the rifled guns. After firing a few rounds and obtaining proper elevations and alignments, great proficiency characterized the firing, and had the target been twelve feet long and six feet high, at least twenty per cent of the shot would have struck it. A great deal of the firing was done with the electric exploder and electric primers, and several men and officers taught the use and application of them thoroughly. A record of the target firing of this day, and also the next, is hereto appended. The next day a march of only five miles was made, and the rest of the time occupied in battery drill and target firing with horses at the limbers and caissons. Sixty-four shots were fired, and the percentage of hits was nearly as good as the preceding day, although the target was first a half mile and afterwards a mile and a half from the firing stand.

On the twenty-first instant the battery made a march of eighteen miles. On the twenty-second it had a long mounted drill and a march of ten miles, which brought it back to Syracuse.

The progress made every and each day of the week was noticeable. The men had had no drill, except standing gun drill, yet each day they improved so that on going into camp the day before returning pieces were packed, picket line stretched, horses unhitched and unharnessed, groomed, fed and watered, tents pitched and made ready for the night all inside of thirty-five minutes. Also on breaking camp, horses were harnessed and hitched, tents struck and all baggage packed inside of twenty-five minutes. Throughout the entire march the discipline was excellent. Progress was made at drill, but the chief idea impressed on the men was the proper care of artillery horses, and so thoroughly

was this done that, assisted by the excellent supervision of Veterinary Hayden, the horses were all in a finer condition on returning than when leaving Syracuse.

The weather during the last three days of the march was fine, and the roads good. Food and rations and forage, obtained along the line of march, were, as a rule, of excellent quality. The practical results obtained by the march may be summed up as follows :

First. A set of new men, of good quality, and a lot of good horses were broken into and made acquainted with battery drill, harnessing, hitching up, pitching and striking camp.

Second. It proved that a battery of the National Guard, under proper auspices, can march and camp and shoot equally as well as one of regulars. I say this from an experience with regulars of many years standing, wherein I have both seen and taken part in marches of light batteries in South Carolina, in Nebraska and in Utah.

The success of the entire expedition I consider to be mainly due to Captain Auer. He seemed to me to possess most excellent judgment, maintained a strict discipline, which was never severe, and showed most untiring energy in furthering all the strictly military interests of the battery and the men that it might redound to the credit of the State, and forgetting himself entirely. I commend him to the favorable consideration of the Commander-in-Chief.

The criticisms I would make are as follows:

First. Officers, outside of the commanding officer, were not as proficient in their drill tactics as they should have been. While this can be excused, to a certain extent, by the fact that this was the first occasion that they had ever had mounted drill, yet I can not help remarking that they seem no better in this respect at the end of the march than they were at the beginning.

Second. While the non-commissioned officers were as a rule good, yet the first sergeant and one sergeant-chief of section were notably inefficient. The result of this was, of course, a lowering of military exercise and duty on the part of the men.

Third. It would seem better that if men were to take these practice marches, to prepare themselves for a state of war, they should learn to take care of themselves entirely. Therefore, instead of purchasing rations at each village tavern, it would have

been more soldierly to have carried rations in baggage-wagons, cooking them by a camp fire, and thus learning all that pertains to the most important part of a soldier's profession.

Fourth. It is but reasonable to suppose that in case of war the most modern of appliances would be issued to troops going to the front. To prepare thoroughly in time of peace, therefore, as far as possible, all arms, ammunition, equipments, harness, etc., should be of the best and newest pattern adopted by the general government.

In view of the success of this experimental march, and the good done the State by the success, I would respectfully recommend that they should be continued each year and supported by the State, efficiently.

The newest and best harness and horse equipments, saddles, horse-hair saddle cloth, good boots for the men, a well packed baggage train containing subsistence and medical stores, revolvers to non-commissioned officers, good ammunition, more canvas in proportion to men sheltered, should be issued if another march is made next year.

The allowance of \$750 per year to a battery is too small, and ought to be increased to \$1,200.

Infantry companies should be ordered out to accompany batteries, and taught how to guard them on the march and support them in action. Where more than one or two organizations are brought into direct contact in this manner, a healthy rivalry sets in that under proper direction and management returns to the State many times the cost. Practical instruction of a vital nature can be given the national guardsmen on such a march that he can receive in no other place. Thus, his eye can be trained to run over the land, seize upon its military advantages and disadvantages; he can be taught not only how, but *where* it is proper to dig rifle-pits and field intrenchments, how to build and repair and destroy roads, bridges, and, railroads, and more than all, he can be taught how to take care of himself properly in the camp or on the march.

Theoretical work and recitation can and should be had frequently in the armory at home, but practical work can only be had on a march like this.

As a final result of my observation, I would state that granted that the State should supply proper arms, harness and ammuni-

tion in case of active hostilities, the battery at Syracuse could take the field at three days notice, properly prepared for a long campaign. Before closing this report, I desire to express my acknowledgments to Captain Auer, his officers and men, for many courtesies extended to me, but more particularly for the willingness with which they listened and carried out any and every suggestion I made to them. My stay with them was not only a pleasure but one also of professional profit to me.

I am, General, very respectfully

Your obedient servant.

WM. R. HAMILTON,

First Lieutenant Fifth U. S. Artillery.

Record of target firing of Fifth Battery, N. Y. N. G., Capt. Michael Auer commanding, September 19, 1888, Sylvan Beach.

NUMBER OF GUN.	Range.	Projectile.	Powder, charge	Elevation.	Where shot struck.
			lbs.	Deg.	
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4½	Left, 150 yards over.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4½	Right, about two yards from buoy.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4½	Line shot, over.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4½	Line, over about 100 yds.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4	Line, good.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4 1-16	Line, over 25 yards.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	2¼	Ricochet.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	2¼	Ricochet.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4¾	Line, over.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4¾	Over, left.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Broken shell.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Line, short 50 yards.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4 1-16	Line, over little.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4¾	Liner, over.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Liner, over.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Broken shell.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4 1-6	Over, left 15 yards.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4¾	Over, left 25 yards.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Tumbler.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Right, over little.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4	Line, over very little.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4 1-16	Over, left 20 yards.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Line, defective shell.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Ricochet.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Good, right little.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Fine, left 20 feet.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Line, right 10 yards.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4¾	Low, range good.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Good, little to the left.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, over.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Right, elevation good.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4¾	Low, to left.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Left, good shot.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Fine, 10 feet of target.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Elevation good, left trifle
No. 4, 3-inch rifle ..	One mile	Case shot..	1	5	Elevation good, trifle low
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Fine shot, little left.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Ten feet of target.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Good, tipped t'rgt on end
No. 4, 3-inch rifle ..	One mile	Case shot..	1	5¼	Tumbler.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	About 10 yards short.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, short.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Right, over little.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	5¼	Line, near target.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	4	Line, 5 yards under.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	4 1-16	Line, over 20 yards.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Ricochet.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Ricochet.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, over.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, over.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Ricochet.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4¾	Ricochet.

Record of target firing of Fifth Battery — (Continued).

NUMBER OF GUN.	Range.	Projectile.	Powder, charge.	Elevation.	Where shot struck.
			lbs.	Deg.	
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, 30 feet short.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, about 5 yds. short.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Right, about 50 feet.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4 5-16	Ricochet.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Over, 50 feet left.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, very close.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4¾	Line, over 20 yards.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4	Target.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Fine.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, right 10 feet.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Right, 30 feet.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	4¾	Fine, little low.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	10 feet outside of target.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	High, over 100 feet.
No. 3, 3-inch rifle ..	One mile	Case shot..	1	4¾	Right, 25 yards.
No. 4, 3-inch rifle ..	One mile	Case shot..	1	5¾	Line, short little.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Over, right.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	Line, over 10 yards.
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Line, 5 feet from buoy.
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	Line, fine.
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	} Volley shots with very fine results.
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	
No. 1, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	
No. 2, 12-pounder ..	One-half mile.	Solid shot..	2	3¾	
No. 3, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	
No. 4, 3-inch rifle ..	One-half mile.	Case shot..	1	2¼	

WILLIAM R. HAMILTON,

*First Lieutenant Fifth U. S. Artillery.**Record of target firing of Fifth Battery, N. Y. N. G., Capt. Michael Auer commanding, at Lakeside, N. Y., September 20, 1888.*

NUMBER OF GUN.	Range.	Projectile.	Powder, charge.	Elevation.	Where shot struck.
			lbs.	Deg.	
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Left, range good.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Line, short 100 yards.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2¼	Line, good.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2¼	Low, line, 50 feet short.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Eleva'n good, short little
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Eleva'n good, short little
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2½	Line, short 25 yards.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2½	Line, short 25 yards.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Elevation good, right.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4¾	Line good, 20 feet short.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2¾	Tumbler.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	2¾	Short 100 yards, line.

Record of target firing of Fifth Battery — (Continued).

NUMBER OF GUN.	Range.	Projectile.	Powder.	Elevation.	Where shot struck.
			charge.		
			lbs.	Deg.	
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Fine, 10 feet of buoy.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Fine, 10 ft. of buoy, right
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3	Twenty yards short, line
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3	Tumbler.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Right, 150 feet.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Line good, short 20 yds.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line, short 20 feet.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line, short.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Short 25 yards, line.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Line shot, short.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line shot, short.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line shot, short.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Line, short 25 feet.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Line, short 35 feet.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Fine, 10 feet of target.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Very good, close.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Two hund. yds., to right
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Good line shot, short.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line, short 25 yards.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Line, 10 feet low.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Five feet from target.
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	4 $\frac{1}{8}$	Line, 20 feet from target.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	3 $\frac{1}{8}$	Ten feet of target.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4	Line, over 15 feet.
No. 1, 12-pounder ..	Three-qrs mile	Solid shot..	2	.....
No. 2, 12-pounder ..	Three-qrs mile	Solid shot..	2	.....
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4 $\frac{1}{8}$	Close, within 15 feet.
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4	Liner, 25 feet left.
No. 3, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4 $\frac{1}{8}$	Twenty feet from target,
No. 4, 3-inch rifle ..	Three-qrs mile	Case shot..	1	4	line.
No. 3, 3-inch rifle ..	Long range...	Case shot..	1	5 $\frac{1}{8}$	Good, 20 feet.
No. 4, 3-inch rifle ..	Long range...	Case shot..	1	5 $\frac{1}{8}$	Tumbler.
No. 3, 3-inch rifle ..	Long range...	Case shot..	1	6	Short, 100 yards.
No. 4, 3-inch rifle ..	Long range...	Case shot..	1	6	Left, short.
No. 3, 3-inch rifle ..	Long range...	Case shot..	1	6	Very short.
No. 4, 3-inch rifle ..	Long range...	Case shot..	1	6	Short.
No. 3, 3-inch rifle ..	Long range...	Case shot..	1	6	Line, short.
No. 4, 3-inch rifle ..	Long range...	Case shot..	1	7 $\frac{1}{8}$ *	Left, line.
No. 3, 3-inch rifle ..	Long range...	Case shot..	1	7 $\frac{1}{8}$ *	Elevation good, short.
No. 4, 3-inch rifle ..	Long range...	Case shot..	1	7 $\frac{1}{8}$ *	Elevation good, short.

* Called.

WILLIAM R. HAMILTON,

First Lieutenant Fifth U. S. Artillery.

The weather was fine during the first day's target practice at Sylvan Beach, and shooting was good. Barrels were used for targets, at one-half and one mile range. At this place the targets were set by a practical surveyor and engineer; water smooth.

On September 20, 1888, at Lakeside, the same kind of targets were used, but were not placed as accurately as at Sylvan Beach, they being set at three-fourths of a mile and one mile (estimated). The weather was good.

The balls of the case-shot were more or less dented, and the cartridges were not properly put up; different weights.

W. R. HAMILTON,
First Lieutenant Fifth U. S. Artillery.

111 EAST TWENTY-EIGHTH STREET, }
NEW YORK, *January 7, 1889.* }

To the Adjutant-General, State of New York, Albany, N. Y.:

SIR.—I have the honor to submit herewith a report of instruction in minor tactics of the officers of the First and Second Brigades, N. G. S. N. Y., during the months of November and December, 1888. At the request of Gen. Louis Fitzgerald, commanding First Brigade, N. G. S. N. Y., I reported every Wednesday evening, during the months of November and December, at his brigade headquarters, at 8.30 o'clock P. M. An order issued by Gen. Fitzgerald to the officers of his brigade notified them of the course of lectures and the nature of the instruction, and put plainly before them the advantages to be derived by attending the school.

The Wednesday night of the first lecture being the night immediately after the national election, the attendance was small, there being about fifteen officers present. At all other lectures the attendance has been very fair, running from twenty-five to fifty. There was a larger representation from the Sixty-ninth and Eighth regiments than from any other, though there were three officers from the Seventh and one from the Twelfth who attended every lecture. The interest manifested was very good and encouraging, proving conclusively that there is a desire to learn, on the part of a great proportion of the National Guard, the more important duties of the soldier beyond the handling of the rifle and guard

duty. The course of lectures was made practical, and as far as possible was shorn of all technicalities. Marches on foot, by rail and water, reconnoissance duty in the field, and in cities, camps and camping, building of military bridges, passage of streams and defiles, riot duty, and high explosives and their handling, formed the subject matter of the different lectures. The lecture lasted about fifty minutes, and after it was over a general discussion or talk on the subject ensued. This talk lasted from a half hour to an hour and was of greater importance, as I consider it, than the lecture proper.

General McLeer, commanding Second Brigade, issued a circular order to his officers, and the lectures were held at his brigade headquarters on Saturday evenings during November and December. The same subjects were treated and the same routine followed. The average attendance was greater than that of the First Brigade, there being from forty to seventy officers at each lecture. The interest, if possible, was even greater also, and I am firmly convinced, from the close personal connections I have formed with many of the officers, that the course has been of much value in giving these officers an insight and knowledge of minor tactics.

It is worth noting that the majority of officers in attendance were officers of considerable experience in the National Guard, and many of them with worthy war records in actual field service. The younger officers were generally absent.

It would seem that as a result of the interest manifested that schools of instruction can be established, and which, if properly directed, would be well attended voluntarily on the part of officers of the guard. That such schools could be of great value to the State, were they well attended, goes without saying.

I am, sir, very respectfully

Your obedient servant.

WM. R. HAMILTON,

First Lieutenant U. S. Army.

(N.)

REPORTS OF COMMANDING OFFICERS

ON

Duty Performed by the Thirteenth, Twenty-third and Forty-third Separate Companies.

QUARTERS THIRTEENTH SEPARATE COMPANY, N. G. S. N. Y., }
JAMESTOWN, N. Y., *January 17, 1888.* }

The Adjutant-General, State of New York, Albany, N. Y.:

SIR.—I have the honor of submitting the following report:

On Saturday morning, January fourteenth, at 3 A. M., I was ordered by the mayor of the city of Jamestown to assemble this command in their armory and be in readiness to obey the following order at a moment's notice:

To Captain HENRY SMITH,

Commander of the Thirteenth Separate Company, N. G. S. N. Y.:

WHEREAS, There is in my opinion and judgment imminent danger of a breach of the peace and resistance to process of the State of New York, in the city of Jamestown, I, therefore, pursuant to the statute in such case made, call upon you for aid in suppressing and averting such breach of the peace, and to assist in enforcing such process and inquest, that your company be forthwith ordered out for such purpose, and I hereby direct you to proceed with your company to West Second street, in said city, at a point westerly from Sprague street, there to aid as you are above directed and required.

O. F. PRICE,

Mayor of the city of Jamestown.

Dated at JAMESTOWN, N. Y., *January 14, 1888.*

This command was assembled as ordered, and remained on continuous duty from Saturday morning at 7 A. M. until Monday morning, January sixteenth, at 11 A. M., when they were discharged by order of the mayor.

The facts of the case, as I understand them, are as follows:

The New York Lake Erie and Western railroad men were restrained by an injunction obtained by the city from crossing West Second street, of this city, with a switch they were constructing, which proposed to lower the grade of said street at that point five feet, and they continued building said switch after the injunction had been served, and there was danger, in the judgment of the mayor, of their laying the switch across said street by force, resisting the process of the State obtained. On Monday morning, January sixteenth, the officers of the New York, Lake Erie and Western railroad agreed, at a meeting of the common council called to confer with them, that they would not interfere in any way with the said street until both sides might be heard by some court of record of the State and the question legally settled.

In conclusion, if I may be permitted, I would add that this is the first time this command has, since my commission, been called upon, and that although nearly all the men on duty have been enlisted in the last few months they conducted themselves in a most soldierly-like manner.

All of which is respectfully submitted.

Very respectfully your obedient servant.

HENRY SMITH,

Captain and Commander.

COWLES GUARD, TWENTY-THIRD SEP. CO. INFANTRY, }
THIRD BRIGADE, N. G. S. N. Y., }
HUDSON, March 5, 1888. }

The Adjutant-General, S. N. Y. :

SIR.—I have the honor to report as follows: On Tuesday February 21, 1888, I received a communication from John M. Felts, the sheriff of Columbia county, New York, a copy of which is inclosed and marked Exhibit 1.

I immediately addressed a communication to the Adjutant-General, S. N. Y., asking permission to order the Twenty-third Separate Company on duty on the first day of March. My communication was returned and my attention called to M. C. 79.

I accordingly ordered the Twenty-third Separate Company, N. G. S. N. Y., to parade in fatigue uniform, with overcoats on, at

8.30 A. M. sharp, Thursday, March 1, 1888. A copy of this order has been forwarded to the brigade headquarters of the Third Brigade, N. G. S. N. Y. On Thursday, March 1, 1888, the members of my command assembled at the armory in the city of Hudson, N. Y., at 8.30 A. M. After making the necessary details for guard, I detailed First Lieutenant Reuben Reynolds as senior officer of the guard, and Second Lieutenant Henry Waterman, junior officer of the guard. At 9 A. M. sharp, the company was marched from the armory and sentries were posted around the entire court-house and jail. I established my own headquarters in the sheriff's office in the court-house. The hour for the execution of the prisoner had been set at as near 10 A. M. as possible.

At exactly 10 A. M. the death warrant was read to the prisoner by the sheriff, and the said prisoner was at once conducted to the scaffold, which had been erected in the court-house yard by the side of the jail. The sheriff had employed a professional hangman from New York city, and at 10 o'clock and nine minutes the rope was cut and Oscar F. Beckwith was hanged in accordance with the judgment of the court. I had the officers of the guard keep their guards posted until the body was removed and the scaffold taken down, when the guards were relieved and the company marched back to the armory, where they arrived at 11.30 A. M.

There was no disturbance of any kind except a little pushing of the crowd to see the body, and there is nothing else of importance to report.

My men did their duty in a manner which made me proud of them.

Very respectfully

Your obedient servant.

CHARLES F. T. BÉALE,

Captain.

[Exhibit 1.]

STATE OF NEW YORK :

SHERIFF'S OFFICE, COLUMBIA COUNTY, }
HUDSON, *February 21, 1888.* }

*To the Commanding Officer Twenty-third Separate Company, N. G.
S. N. Y.:*

SIR.—In accordance with section 79 of the Military Code of the State of New York, I hereby request you to order your company out for parade and to act as a guard during the hours of 10 A. M. to 2 P. M., Thursday, March 1, 1888, on the occasion of the execution of Oscar F. Beckwith; said guard to be stationed in and around the court-house and jail in the city of Hudson, New York.

JOHN M. FELTS,
Sheriff of Columbia County, New York.

ARMORY FORTY-THIRD SEPARATE COMPANY, N. G. S. N. Y., }
OLEAN, N. Y., *November 30, 1888.* }

The Adjutant-General State of New York, Albany, N. Y.:

SIR.—I have the honor to report that this command was ordered out the night of the twenty-eighth inst., in response to a formal demand made by the sheriff of this county, and under the direction of the sheriff we marched at 5 A. M., of the twenty-ninth inst. and followed the directions of the sheriff to assist in the service of civil process, the command returning to the armory at 8.30 A. M. of the twenty-ninth inst.

I have sir, the honor to be

Your obedient servant.

C. G. THYNG,
Captain Forty-third Separate Company.

REPORT OF ATTENDANCE OF THE FORTY-THIRD SEPARATE COMPANY, N. G. S. N. Y., ORDERED TO AID CIVIL
AUTHORITY ON NOVEMBER 29, 1888.

PRESENT.										ABSENT.						PRESENT AND ABSENT.	Aggregate last report.	Remarks.	
FOR DUTY.				TOTAL.		WITH LEAVE.		TOTAL.		Sick, enlisted men.		TOTAL.							
Captains.	First lieuten- ants.	Assistant sur- geons.	Company staff sergeants.	Sergeants.	Corporals.	Privates.	ENLISTED MEN.		Commissioned officers.	Enlisted men.	Without leave, enlisted men.	Sick, enlisted men.	Commissioned officers.	Enlisted men.					
							COMMISSIONED OFFICERS.	ENLISTED MEN.											
1	1		2	3	8	52	2	65	1	7	2	3	1	12	3	77	80	80	Called upon by sheriff to aid in service of civil process. Order issued command 10 P. M., Nov. 28, to report at 4.30 A. M., Nov. 29, 1888. Company left armory at 5 A. M., Nov. 29, and returned at 8.30 A. M., same day.

I hereby certify that this report is correct.

C. G. THYNG,
Captain Commanding Forty-third Separate Company.

OLEAN, N. Y., November 29, 1888.

(O.)
REPORT OF COMMANDING OFFICER

ON

Service of Ninth Regiment at Gettysburg, July 1, 2 and 3, 1888.

HEADQUARTERS NINTH REGIMENT, N. G. S. N. Y., }
NEW YORK, *July 9, 1888.* }

The Adjutant-General State New York, Albany, N. Y.:

SIR.—I have the honor to report that in pursuance of S. O. 62, C. S., from G. H., the Ninth Regiment assembled at armory, Saturday, June thirtieth, at 7 o'clock P. M., for the purpose of proceeding to Gettysburg to attend the dedication ceremonies of the Ninth's monument, July first, and to act as escort to the Society of the Army of the Potomac, July second and third. Contract had been made for transportation of the command to and from Gettysburg with the Brooklyn Annex Company, and their boat was promptly on hand at foot of Twenty-second street, North river, at the appointed hour. The special train arranged for, via Pennsylvania railroad, left Jersey City in two sections at about 10 o'clock P. M., and landed the regiment safely at destination about 8 o'clock A. M., July first.

Through the courtesy of Governor Beaver, of Pennsylvania, whose friendship was especially enlisted by General King, the secretary of the Society of the Army of the Potomac, tent equipage (exclusive of mess and two other small tents) was provided, and camp pitched ready for occupation on our arrival on Springs Hotel grounds, about one and one-half miles from Gettysburg. By direction of General Varian I detailed two officers, Captain Wetthaus and Lieut. Ehrman, to precede the regiment five (5) days, so as to supervise the laying out of camp, and make all other arrangements necessary for the comfort of the troops. The ground

on which the camp was located was in a most wretched condition by reason of the tremendous rain-fall of Tuesday and Wednesday, and water was standing in many of the tents. Through the energy of the officers mentioned, boards were provided, one to each man, so that comparative comfort was insured and sickness averted, which would certainly have been the result had the men been compelled to lie on the ground. Each day we remained witnessed great improvement in condition of camp, as the weather could not have been more propitious than it was, and when we left the ground was getting in fine condition.

Through the courtesy of Governor Green, of New Jersey, I was enabled to obtain blankets for the use of the command; they were issued to me at the camp of the New Jersey troops, some three miles distant, and returned by me to the same place Tuesday P. M. before leaving.

Guard was duly mounted on arrival in camp, relieving the one detailed for duty before leaving New York. On the afternoon of day of arrival the regiment marched to Gettysburg for the purpose of escorting the orator of the day, Hon. O. B. Potter, and his associates, to the monument, said duty being performed by the active and veteran organizations jointly. After the programme of exercises had been carried out, the command fired three volleys, which ended the ceremonies, and the regiment was marched back to camp, but arriving too late for the customary dress parade.

Monday, July second, the command formed part of the escort to the Society of the Army of the Potomac, the line of march being from Springs Hotel to the cemetery and return.

Tuesday, July third, Major-General John C. Robinson, who was the commander of the division of which the Ninth formed a part at the battle of Gettysburg, reviewed the regiment at 10 o'clock A. M. In the afternoon the command again formed part of the escort to the Society of the Army of the Potomac, marching over the same ground as the day previous and returning to camp in time for dress parade.

I issued orders in the morning preparatory to breaking camp, and all baggage and materials were sent forward shortly after 7 o'clock P. M.

The regiment left camp at 8.50 o'clock P. M. to take the special train from Gettysburg, and at 10 o'clock left the station with the command safely on board. As the train was a heavy one (not

being in sections) more time was required to return than was consumed in going, and it was 9.30 o'clock A. M. July fourth before Jersey City was reached. I had telegraphed from Philadelphia for breakfast for the men, and it was served in the railroad depot before going on the boat, greatly refreshing them.

Landing was made at foot of Twenty-second street and North river, and the regiment marched to armory and dismissed at 12.30 o'clock P. M. There was but little sickness during the trip, and nothing of a serious nature.

I can not speak too highly of the conduct of the men in general, and I feel I am only adhering strictly to the truth in affirming that their appearance, drill and discipline reflected credit on the New York State National Guard. Your attention is respectfully invited to the accompanying copy of a letter received from the recording secretary of the Society of the Army of the Potomac.

I am greatly indebted for this successful result to the labors of the several officers of the command, field, staff and line, who vied with each other in their efforts to make manifest the fact that the present members of the organization were not unworthy successors of those to whose honor and memory a grateful State, in conjunction with loving comrades, had united in erecting a monument which should testify to all coming generations their loyalty and patriotism.

I trust it may not be considered amiss in this report to express my appreciation of the compliment paid the regiment in detailing Brigadier-General Bartlett to accompany it; he is most deservedly popular with the organization, and no action of the Commander-in-Chief could have been more gratifying to the command, and if I may be allowed to add, or to myself personally, and it is needless to say that in him our great commonwealth was most worthily represented. I have the honor to be

Very respectfully

Your obedient servant.

WILLIAM SEWARD, JR.,

Colonel Commanding.

(P.)

STATEMENT OF DISBURSEMENTS.

RECAPITULATION OF AMOUNTS EXPENDED FROM THE GENERAL FUND.

Total amount expended as per cash book.....	\$496,719 39
Adjutant-General, services.....	\$15,600 00
Adjutant-General, expenditures.....	4,051 52
Inspector-General, services.....	3,613 97
Inspector-General, expenditures.....	1,965 49
General Inspector of Rifle Practice, services.....	2,658 26
General Inspector of Rifle Practice, expenditures.....	4,380 62
Chief of Ordnance, services.....	16,596 73
Chief of Ordnance, purchases.....	141,720 09
Chief of Ordnance, expenditures.....	14,254 68
Allowance to officers, section 52 Military Code.....	4,100 00
Allowance to brigade headquarters, section 97 Military Code.....	4,910 40
Allowance to regimental and battalion headquarters, section 97 Military Code.....	4,212 67
Appropriations to rifle ranges.....	6,464 00
Courts-martial and boards of examination.....	2,073 15
Allowance to organizations, section 97 Military Code...	127,705 30
Camp of Instruction, near Peekskill.....	141,821 36
Judge Advocate-General, services and expenditures....	591 15
	<u>\$496,719 39</u>

*Expended for services of Adjutant-General, Assistant Adjutants-General,
Clerks and Messengers, from January 1, 1888, to January 1, 1889.*

January.....	\$1,299 99
February.....	1,299 99
March.....	1,300 02
April.....	1,299 99
May.....	1,299 99
June.....	1,300 02

July	\$1,299 99
August	1,299 99
September	1,300 02
October	1,299 99
November	1,299 99
December	1,300 02
	<hr/>
	\$15,600 00
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Expenditures of Adjutant-General's Department from January 1, 1888, to January 1, 1889, including cost of tactical books, printing, expressage, traveling expenses, etc.

January, paid for December, 1887	\$229 39
January	289 04
February	365 60
March	325 36
April	405 80
May	628 00
June	317 26
July	182 41
August	365 67
September	496 49
October	290 00
November	156 50
	<hr/>
	\$4,051 52
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Expended for services of Assistant Inspectors-General and Clerks, from January 1, 1888, to January 1, 1889.

January	\$279 17
February	383 16
March	319 17
April	279 16
May	371 16
June	307 16
July	279 17
August	279 16
September	279 16
October	279 16
November	279 17
December	279 17
	<hr/>
	\$3,613 97
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Expenditures of Inspector-General's Department from January 1, 1888, to January 1, 1889, including traveling expenses, printing, expressage, telegraphing, etc.

January	\$347 55
February	112 76
March	51 83
April	125 59
May	456 79
June	121 69
July	64 99
August	139 75
September	181 69
October	117 42
November	117 17
December	128 26
	<hr/>
	\$1,965 49

Expended for services of the General Inspector of Rifle Practice and Clerks from January 1, 1888, to January 1, 1889.

January	\$241 66
February	241 66
March	241 66
April	241 66
May	241 66
June	241 66
July	241 66
August	241 66
September	241 66
October	241 66
November	241 66
	<hr/>
	\$2,658 26

Expenditures in the Department of Rifle Practice from January 1, 1888, to January 1, 1889, including traveling expenses, State prizes, pay of scorers, stationery, printing, telegraphing, expressage, etc.

January	\$41 64
February	72 90
March	78 47
April	109 19
May	574 67
June	491 47

July.....	\$334 84
August.....	397 45
September.....	1,282 36
October.....	674 72
November.....	322 91
	<hr/>
	\$4,380 62
	<hr/>

Expended for services of Chief of Ordnance, Assistant Chief of Ordnance, Clerks, Workmen and Messengers from January 1, 1888, to January 1, 1889.

January.....	\$1,436 99
February.....	1,417 49
March.....	1,456 49
April.....	1,373 49
May.....	1,464 49
June.....	1,552 99
July.....	1,618 99
August.....	1,636 49
September.....	1,603 49
October.....	1,618 49
November.....	1,417 33
	<hr/>
	\$16,596 73
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Expended by Chief of Ordnance for purchase of issues to the National Guard from January 1, 1888, to January 1, 1889, of service uniforms, helmets, caps, drums, drum material, blouses, knapsacks, equipments, flags, etc.

January, paid for December, 1887.....	\$11,442 61
January.....	3,595 50
February.....	2,281 05
March.....	4,464 58
April.....	5,854 52
May.....	1,952 20
June.....	22,308 48
July.....	22,996 08
August.....	14,573 65
September.....	35,597 54
October.....	12,700 00
November.....	2,500 90
December.....	1,452 98
	<hr/>
	\$141,720 09
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Expenditure of Ordnance Department from January 1, 1888, to January 1, 1889, including traveling expenses, stationery, printing, telegraphing, expressage, purchase of articles to repair State property, etc.

January	\$418 12
February	204 00
March	134 74
April	373 61
May	600 57
June	4,415 95
July	998 86
August	1,419 62
September	308 20
October	2,970 87
November	1,465 64
December	944 50
	<hr/>
	\$14,254 68

Expended from January 1, 1888, to January 1, 1889, to aid officers in procuring their arms and equipments, pursuant to section 52, Military Code.

January	\$320 00
February	380 00
April	950 00
June	620 00
July	330 00
August	550 00
September	200 00
December	750 00
	<hr/>
	\$4,100 00

Expended in allowance to Brigade Headquarters from January 1, 1888, to January 1, 1889, pursuant to section 97, Military Code.

First Brigade	\$1,200 00
Second Brigade	1,200 00
Third Brigade	1,312 00
Fourth Brigade	1,198 40
	<hr/>
	\$4,910 40

Expended in allowance to Regimental and Battalion Headquarters from January 1, 1888, to January 1, 1889, pursuant to section 97, Military Code.

Seventh Regiment	\$250 00
Eighth Regiment	500 00
Ninth Regiment	500 00
Eleventh Regiment	250 00
Twelfth Regiment	250 00
Thirteenth Regiment	250 00
Twenty-second Regiment	250 00
Twenty-third Regiment	250 00
Thirty-second Regiment	212 67
Forty-seventh Regiment	500 00
Sixty-fifth Regiment	250 00
Sixty-ninth Regiment	500 00
Seventy-first Regiment	250 00
	<hr/>
	\$4,212 67
	<hr/>

Expended in Appropriations to Rifle Associations or Ranges from January 1, 1888, to January 1, 1889.

National Rifle Association	\$4,000 00
Albany (Rensselaerwyck) rifle range	650 00
Buffalo (Bay View) rifle range	500 00
Buffalo (Bay View) rifle range, repairs	339 00
Elmira rifle range	100 00
Poughkeepsie rifle range	100 00
Walton rifle range	50 00
Watertown rifle range	50 00
Kingston rifle range	50 00
Auburn rifle range	50 00
Olean rifle range	50 00
Schenectady rifle range	50 00
Penn Yan rifle range	50 00
Newburgh rifle range	50 00
Niagara Falls rifle range	50 00
Saratoga rifle range	50 00
Oneonta rifle range	50 00
Binghamton rifle range	50 00
Glens Falls rifle range	50 00

Ogdensburg rifle range	\$50 00
Rochester rifle range.....	50 00
Oswego rifle range.....	25 00
	<hr/>
	\$6,464 00
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Expended for services and expenses of Courts-Martial, Delinquency Courts, Boards of Survey and Boards of Examination from January 1, 1888, to January 1, 1889.

State Board of Examination		\$91 48
First Brigade	\$59 90	
First Brigade ..	27 25	
	<hr/>	87 15
Second Brigade ..	\$170 00	
Second Brigade	258 50	
	<hr/>	428 50
Fourth Brigade	\$279 92	
Fourth Brigade	270 60	
	<hr/>	550 52
Ninth Regiment.....		71 00
Thirteenth Regiment.....		388 25
Seventy-fourth Regiment.....	\$429 25	
Seventy-fourth Regiment.....	17 50	
	<hr/>	446 75
Twenty-first Separate Company		9 50
		<hr/>
		\$2,073 15
		<hr/> <hr/>

STATEMENT of *Military Funds Appropriated to Organizations of the National Guard, from January 1, 1888, to January 1, 1889, pursuant to section 98, Military Code.*

ORGANIZATION.	On percentage of present at five parades.	General appropriations to batteries and separate companies.	Total.
Seventh Regiment.....	\$7,198 40	.....	\$7,198 40
Eighth Regiment.....	4,156 80	.....	4,156 80
Ninth Regiment.....	5,974 40	.....	5,974 40
Tenth Battalion.....	1,281 60	.....	1,281 60
Twelfth Regiment.....	3,944 00	.....	3,944 00
Thirteenth Regiment.....	7,579 20	.....	7,579 20
Fourteenth Regiment.....	3,000 00	.....	3,000 00
Twenty-second Regiment...	3,868 80	.....	3,868 80
Twenty-third Regiment...	4,630 40	.....	4,630 40
Thirty-second Regiment...	4,281 60	.....	4,281 60
Forty-seventh Regiment...	5,704 80	.....	5,704 80
Sixty-fifth Regiment.....	2,851 20	.....	2,851 20
Sixty-ninth Regiment.....	5,092 80	.....	5,092 80
Seventy-fourth Regiment...	3,748 80	.....	3,748 80
First Battery.....	793 60	\$750 00	1,543 60
Second Battery.....	756 80	750 00	1,506 80
Third Battery.....	897 60	1,500 00	2,397 60
Fifth Battery.....	948 80	1,500 00	2,448 80
Sixth Battery.....	992 00	1,500 00	2,492 00
Signal Corps, First Brigade.	156 80	.....	156 80
First Separate Co.....	1,048 00	500 00	1,548 00
Second Separate Co.....	585 60	250 00	835 60
Third Separate Co.....	576 60	250 00	826 60
Fourth Separate Co.....	1,011 20	500 00	1,511 20
Fifth Separate Co.....	1,225 60	500 00	1,725 60
Sixth Separate Co.....	1,456 00	500 00	1,956 00
Seventh Separate Co.....	1,113 60	500 00	1,613 60
Eighth Separate Co.....	851 20	500 00	1,351 20
Ninth Separate Co.....	608 00	500 00	1,108 00
Tenth Separate Co.....	356 80	250 00	606 80
Eleventh Separate Co.....	732 80	500 00	1,232 80
Twelfth Separate Co.....	550 40	250 00	800 40
Thirteenth Separate Co....	1,286 40	500 00	1,786 40
Fourteenth Separate Co....	891 20	500 00	1,391 20
Fifteenth Separate Co....	769 60	500 00	1,269 60
Sixteenth Separate Co....	679 80	500 00	1,179 80
Seventeenth Separate Co...	681 60	500 00	1,181 60
Eighteenth Separate Co....	772 80	500 00	1,272 80
Nineteenth Separate Co....	1,431 20	500 00	1,931 20
Twentieth Separate Co....	456 00	250 00	706 00
Twenty-first Separate Co...	1,056 00	500 00	1,556 00
Twenty-second Separate Co.	1,219 20	500 00	1,719 20

STATEMENT of *Military Funds Appropriated, etc.*— (Continued).

ORGANIZATION.	On percentage of present at five parades.	General appropriation to batteries and separate companies.	Total.
Twenty-third Separate Co..	\$897 60	\$500 00	\$1,397 60
Twenty-fourth Separate Co..	891 20	500 00	1,391 20
Twenty-fifth Separate Co...	124 80	250 00	374 80
Twenty-sixth Separate Co..	510 40	250 00	760 40
Twenty-seventh Separate Co.	379 20	250 00	629 20
Twenty-eighth Separate Co.	928 00	500 00	1,428 00
Twenty-ninth Separate Co.	707 20	500 00	1,207 20
Thirtieth Separate Co.....	819 20	500 00	1,319 20
Thirty-first Separate Co....	825 60	500 00	1,325 60
Thirty-second Separate Co.	601 60	250 00	851 60
Thirty-third Separate Co...	886 40	500 00	1,386 40
Thirty-fourth Separate Co..	779 20	500 00	1,279 20
Thirty-fifth Separate Co....	1,036 80	500 00	1,536 80
Thirty-sixth Separate Co...	888 00	500 00	1,388 00
Thirty-seventh Separate Co.	828 80	500 00	1,328 80
Thirty-eighth Separate Co.	784 00	500 00	1,284 00
Thirty-ninth Separate Co...	494 40	250 00	744 40
Fortieth Separate Co.....	380 80	250 00	630 80
Forty-first Separate Co.....	413 40	250 00	663 40
Forty-second Separate Co...	692 80	250 00	942 80
Forty-third Separate Co....	1,023 10	500 00	1,523 10
Forty-fourth Separate Co..	475 20	250 00	725 20
Forty-fifth Separate Co....	369 60	250 00	619 60
	\$102,955 30	\$24,750 00	\$127,705 30

Amount expended in connection with the camp of instruction, near Peekskill, N. Y., for supplies, subsistence, transportation and pay of troops, \$141,821.36.

Expended for services and expenses of Judge-Advocate General's department from January 1, 1888, to January 1, 1889.

March	\$525 00
August	66 15
	<u>\$591 15</u>

Military Record Fund, salary of keeper and janitor in Bureau of Military Statistics.

January	\$130 00
February	130 00
March	130 00
April	50 00
May	50 00
June	76 00
July	110 00
August	110 00
September	116 75
October	112 00
November	110 00
December	110 00
	<hr/>
	\$1,234 75

Expended for services and traveling expenses from January 1, 1888, to January 1, 1889, in prosecuting war claims against United States Government under chapter 460, Laws of 1887.

January	\$380 80
February	422 33
March	379 75
April	388 80
May	339 85
June	451 58
July	333 33
August	333 33
September	387 64
October	335 73
November	392 68
December	466 74
	<hr/>
	\$4,612 56

Expended by Chief of Ordnance from January 1, 1888, to January 1, 1889, for repairing State arsenals and armories, and for salaries and traveling expenses superintending repairs

January	\$1,195 14
February	458 68
March	408 55
April	865 13
May	568 30

June	\$6,401 51
July	1,546 90
August	1,379 77
September	292 23
October	87 38
November	119 36
	<hr/>
	<u>\$13,322 95</u>

Expenditures in erection of State armories under direction of the Adjutant-General, Inspector-General and Chief of Ordnance, Commissioners appointed by the acts making the several appropriations.

Brooklyn armory (chap. 663, Laws of 1887)...	\$14,147 65
Binghamton military storehouse (chap. 642, Laws of 1887)	1,200 00
Binghamton military storehouse (chap. 642, Laws of 1887)	1,251 26
Binghamton military storehouse (chap. 642, Laws of 1887)	2,500 00
Binghamton military storehouse (chap. 642, Laws of 1887)	3,671 20
Elmira armory (chap. 283, Laws of 1887)	1,970 00
Elmira armory (chap. 283, Laws of 1887)	4,367 50
Elmira armory (chap. 283, Laws of 1887)	3,300 00
Elmira armory (chap. 283, Laws of 1887)	12,268 62
Hoosick Falls armory (chap. 677, Laws of 1887)	1,533 50
Troy armory (chap. 330, Laws of 1886)	86 57
Troy armory (chap. 330, Laws of 1886)	513 50
Syracuse armory park improvement (chap. 72, Laws of 1888)	2,914 62
	<hr/>
	<u>\$49,724 42</u>

Expended for the improvement of the State camp ground under the direction of the Adjutant-General, Inspector-General and Chief of Ordnance, Commissioners appointed by chapter 460, Laws of 1887.

March	\$2,777 60
April	4,943 87
May	3,896 60
July	2,360 60
September	2,098 82
	<hr/>
	<u>\$16,077 49</u>

Expended for expenses of Ninth Regiment to Gettysburgh, Pa., under chapter 288, Laws of 1888.

September	\$7,000 00
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Expended for the purchase of new overcoats for the National Guard under the direction of the Adjutant-General, Inspector-General and Chief of Ordnance, commissioners appointed by chapter 460, Laws of 1887, and chapter 270, Laws of 1888.

March	\$130 60
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November	25,140 00
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	\$25,270 60
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CONTINGENT FUND.

1888.

January 1. Balance on hand	\$1,739 98
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August 6. Received from sale of old buildings, etc., on State armory lot, Albany	747 50
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1889.

January 1. Balance on hand	\$2,487 48
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STATE OF NEW YORK.

No. 108.

IN ASSEMBLY,

MAY 9, 1889.

REPORT

OF

SPECIAL COMMITTEE ON RULES OF THE ASSEMBLY.

To the Assembly:

The undersigned, a committee appointed by resolution of the Assembly, adopted May 11, 1888, to prepare a system of rules for the Assembly, and to methodize and improve the manner of making laws, respectfully submit the following report.

J. W. HUSTED,
ROBERT RAY HAMILTON,
CHARLES T. SAXTON,
W. F. SHEEHAN,
JOSEPH BLUMENTHAL,
FREMONT COLE.

Dated *May* 9, 1889,

RULES OF THE ASSEMBLY.

CHAPTER I.

POWERS AND DUTIES OF THE SPEAKER.

RULE I. The Speaker shall take the chair each day at the hour to which the House shall have adjourned. He shall call to order, and, except in the absence of a quorum, shall proceed to business in the manner prescribed by these rules.

RULE II. He shall possess the powers and perform the duties herein prescribed, viz. :

1. He shall preserve order and decorum, *and, in debate, shall prevent personal reflections, and confine members to the question under discussion. When two or more members rise at the same time, he shall name the one entitled to the floor.*

2. He shall decide all questions of order subject to appeal to the House. On every appeal he shall have the right, in his place, to assign his reason for his decision. *In case of such appeal no member shall speak more than once.*

3. He shall appoint all committees, except where the House shall otherwise order.

4. He may substitute any member to perform the duties of the Chair for a period not exceeding two consecutive legislative days, but for no longer period, except by special consent of the House.

5. When the House shall be ready to go into Committee of the Whole, he shall name a chairman to preside therein.

6. He shall certify the passage of all bills by the House, with the date thereof, together with the fact whether passed as majority, three-fifths or two-thirds bills, as required either by the Constitution or laws of this State.

7. He shall designate the persons who shall act as reporters for the public press, not exceeding thirty in number; but no reporter shall be admitted to the floor who is not an authorized representative of a daily paper. Such reporters, so appointed, shall be entitled to such seats as the Speaker shall designate, and shall have the right to pass to and fro from such seats in entering or leaving the Assembly

chamber. No reporter shall appear before any of the committees in advocacy of, or in opposition to any bills under consideration before such committees. A violation of this rule will be sufficient cause for the removal of such reporter. Removal for this or other cause shall be vested in the Speaker.

8. He shall not be required to vote in ordinary legislative proceedings, except where his vote would be decisive. In case of a tie vote the question shall be lost.

He shall have general control, except as provided by rule or law, of the Assembly chamber and of the corridors and passages in that part of the Capitol assigned to the use of the Assembly. In case of any disturbance or disorderly conduct in the galleries, corridors or passages, he shall have power to order the same to be cleared, and may cause any person guilty of such disturbance or disorderly conduct to be brought before the bar of the House. In all such cases the members present may take such measures as they shall deem necessary to prevent a repetition of such misconduct, either by the infliction of censure or pecuniary penalty, as they may deem best, on the parties thus offending.

9. He shall also be *ex-officio* member and chairman of the Committee on Rules.

CHAPTER II.

ORDER OF BUSINESS.

RULE III. The first business of each day's session shall be the reading of the journal of the preceding day, and the correction of any errors that may be found to exist therein. Immediately thereafter, except on days and at times set apart for the consideration of special orders, the order of business, which shall not be departed from, except by a vote of two-thirds of the members present, to be determined by a call of the roll, shall be as follows:

1. Messages from the Governor and from the Senate, communications from State officers, reports from State institutions, and reports from the committees on Legislation and Printed and Engrossed Bills.

2. First reading of a bill and by its title and reference.

3. Reports of standing committees in their order.

4. Reports of select committees.

After the foregoing orders have been finished the following shall be the orders of the day:

For Mondays:

1. Bills on second reading.

2. Motions by counties in alphabetical order.

3. Original resolutions by counties in reverse order.

4. Unfinished business (other than bills) may be considered.

For Tuesdays :

1. *Bills on third reading.*
2. *Bills on second reading.*

For Wednesdays :

1. *Bills on second reading.*
2. *Bills on third reading.*

For Thursdays :

1. *Bills on third reading.*
2. *Bills on second reading.*

For Fridays :

1. *Bills on second reading.*
2. *Bills on third reading.*

For Saturdays :

1. *Bills on second reading.*

When the regular orders for any day shall be gone through, the following shall be the order of business :

1. *Bills on third reading.*
2. *Bills on second reading.*
3. *Bills on first reading.*

When the consideration of the orders of the day is not finished, those not acted upon shall be the orders for the next and each succeeding day until disposed of, and shall be entered first in the calendar, without change in their order.

CHAPTER III.

RIGHTS AND DUTIES OF MEMBERS.

RULE IV. *Petitions, memorials and remonstrances may be presented to the Clerk at the close of each day's session. Bills may be deposited, at any time during the session, before 12 o'clock noon, in a box to be known as the "bill box," which shall be under the immediate charge of the Clerk, and which shall be kept securely locked until all bills so deposited are removed by him, or by a deputy clerk duly authorized by him. Every bill shall be in duplicate, and both shall be indorsed with a statement of the title, accompanied by the name of the member introducing them. In addition to such indorsement the word "original" shall be indorsed upon one and the word "copy" upon the other.*

At the close of each day's session the bills so deposited and indorsed "original" shall be handed by the Clerk to the Speaker for his examination, after due record thereof has been entered in a book which shall be kept for that purpose. At the next regular session, as provided for in subdivision 2 of rule 3, the Speaker shall announce the introduction of all bills thus received by him, for their first reading, and thereupon shall refer them to the appropriate committees, with the consent of the House.

The bills indorsed "copy," after the originals have been entered in the record book, shall on the day of their reception be filed by the Clerk with the librarian of the Assembly, who shall keep a record thereof, which, together with the bills, shall, under his supervision, be subject to public inspection during the regular office hours of the library.

Every bill, immediately upon its introduction, shall be printed and placed on the files of the members. It shall retain its original printed number, when reprinted, together with its new number thereafter, during all stages of its progress.

RULE V. A report of a committee must be indorsed with a statement of such report, together with the name of the committee making the same, with the amendments, if any, adopted by the committee, to be signed by the chairman; a petition, memorial or remonstrance, with a brief statement of its contents, accompanied by the name of the member presenting it; a notice or resolution with his name.

RULE VI. Every member who shall be within the bar of the House when a question is stated from the chair shall vote thereon, unless he be excused by the House, or unless he be directly interested in the question; but no member shall be obliged to vote on any question unless within the bar when his name is called, *nor shall the roll of absentees be more than once called.* The bar of the House shall be deemed to include the body of the Assembly chamber.

CHAPTER IV.

OF ORDER AND DECORUM.

RULE VII. No member rising to debate, to give notice, make a motion or report, or to present a petition or other paper, shall proceed until he shall have addressed the Speaker, and have been recognized by him.

RULE VIII. While a member is speaking, no member shall entertain any private discourse or pass between him and the chair.

RULE IX. While the Speaker is putting a question, or a count is being had, no member shall speak or leave his place.

RULE X. When a motion to adjourn is carried, the members and officers shall keep their seats and places until the Speaker declares the House adjourned.

CHAPTER V.

OF ORDER IN DEBATE.

RULE XI. No member shall speak, *except in his place, nor more than twice on any question,* without leave of the House.

RULE XII. If any member, in speaking, transgresses the rules of the House, the Speaker, or any member, may call to order, in which

case the member so called to order shall immediately sit down, and shall not rise unless to explain or proceed in order.

RULE XIII. All questions relating to the priority of one question or subject-matter over another, under the same order of business, shall be decided without debate.

CHAPTER VI.

ON COMMITTEES AND THEIR DUTIES.

RULE XIV. The standing committees shall be as follows, viz.:

To consist each of eleven members :

Ways and Means.

Judiciary.

General Laws.

Legislation.

Codes.

Taxation and Retrenchment.

Canals.

Affairs of Cities.

Railroads.

Commerce and Navigation.

Insurance.

Banks.

Electricity, Gas and Water Supply.

Internal Affairs.

Labor and Industries.

Excise.

Affairs of Villages.

Roads and Bridges.

Public Printing.

Public Health.

Public Education.

Public Buildings and Grounds.

Public Lands and Forestry.

Public Institutions.

Public Expenditures.

Military Affairs.

Soldiers' Home.

To consist each, of nine members :

Claims.

Federal Relations.

Miscellaneous Corporations.

State Prisons.

Fisheries and Game.

Privileges and Elections.

Civil Divisions.

Trade and Manufactures.

Agriculture.

Indian Affairs.

To consist each of five members :

Rules.

Printed and Engrossed bills.

Unfinished business.

RULE XV. It shall be the duty of each of the several committees to consider and report without unnecessary delay upon the respective bills and other matters referred to it by the House ; and also to inquire into the matters indicated by its name, and to report thereon to the House any information and any bill or resolution which it may deem conducive to the public interest. *No bill affecting the rights of individuals, or of private or municipal corporations, otherwise than as it affects generally the people of the whole State, shall be reported by a committee, unless it is made to appear to the satisfaction of the committee that notice has been given, by public advertisement or otherwise, to all parties interested, without expense to the State, or unless evidence satisfactory to the committee is produced that the parties interested have in writing waived notice. In case the bill affects the rights of a municipal corporation, such notice shall be given to the mayor, in cities, and to the president of the board of trustees, in villages.*

RULE XVI. *The Committee on Legislation shall examine and correct the bills which are referred to it, for the purpose of avoiding repetitions and unconstitutional provisions, insuring accuracy in the text and references, and consistency with the language of the existing statutes. It shall also report whether the object sought to be accomplished can be secured without a special act, under existing laws, or without detriment to the public interests, by the enactment of a general law (provided, that any change in the sense or legal effect, or any material change in construction, shall be reported to the House as a recommendation and not as an amendment).*

CHAPTER VII.

OF THE SPECIAL ORDERS.

RULE XVII. *Any matter may be made a special order for any particular day, by the assent of two-thirds of the members present. When so made, a similar vote shall be requisite to rescind or postpone.*

CHAPTER VIII.

OF THE COMMITTEE OF THE WHOLE.

RULE XVIII. *Any matter may be committed to the Committee of the Whole, by the assent of two-thirds of the members present.*

RULE XIX. The same rules shall be observed in Committee of the Whole as in the House, so far as the same are applicable, except that the previous question shall not apply, nor the yeas and nays be taken.

RULE XX. A motion to rise and report progress shall be in order at any stage, and shall be decided without debate.

RULE XXI. Bills and other matters shall be considered in Committee of the Whole in the following manner, viz.: They shall be first read through, if the committee so direct; otherwise they shall be read and considered by sections, leaving the title to be last considered. All amendments, in their proper connections, shall be reported to the House by the Chairman. Bills reported by the Committee of the Whole shall be subject to debate before the question to agree with the committee in their report is put; but such amendments only shall be in order as were offered in Committee of the Whole, and where a bill shall be reported by the Committee of the Whole with the enacting clause stricken out, and the report shall be agreed to by the House, or a report favorable to the passage of a bill shall be disagreed to by a vote of the House, such bill shall be considered as rejected.

RULE XXII. If at any time when in Committee of the Whole house, it be ascertained that there is no quorum, the Chairman shall immediately report the fact to the Speaker.

CHAPTER IX.

OF BILLS.

RULE XXIII. No bill shall be introduced in the House except in one of the following modes, viz.:

1. *As specified in Rule 4.*
2. By report of a committee.
3. By order of the House.
4. By message from the Senate.

RULE XXIV. No private bill shall be introduced, but upon a memorial or petition presented to the House and signed *and verified* by the party or parties praying for the passage of the same, except by order of the House.

RULE XXV. Every message from the Senate, communicating any bill for the concurrence of the House, shall, with the accompanying documents, if any, be referred to a standing or select committee to

consider and report thereon, and every such message communicating an amendment, shall be referred to the committee which reported the measure proposed to be amended, with power to report at any time.

RULE XXVI. All bills, whether introduced in the House or communicated by message from the Senate, shall, after their *first* reading, be referred to a standing or select committee, to consider and report thereon. Such committee may report any bill, either with or without amendments, or they may report against the same. *All bills reported favorably or for consideration shall be immediately printed, and if reported with amendments, the amendments proposed by the committee shall be printed in italics, except in cases where the committee recommend striking out certain words, in which case they shall be printed "Stricken through."*

All bills favorably reported shall, if the report be agreed to, be placed on the order of second reading ; but where a bill has been reported adversely, and such report shall be agreed to by the House, it shall be considered as rejected. No committee shall be discharged from the consideration of a bill thus referred until the committee has had a meeting subsequent to its reference, *and* has neglected to consider the bill ; nor shall an adverse report be received unless the introducer of the bill has first had an opportunity to be heard.

RULE XXVII. *Bills on the order of second reading shall be subject to debate before the motion to order them to a third reading is entertained ; such bills shall be considered section by section. The main question, if ordered, shall apply only to the section at the time under consideration. After the bill has been thus read through, one-half hour shall be allowed for debate, but no person shall speak more than fifteen minutes, except by consent of the House.*

RULE XXVIII. *Every bill shall receive three separate readings, and on three different days, previous to its passage, except by unanimous consent.*

RULE XXIX. *All bills amended on second reading shall be reprinted before they are read a third time, and no bill shall be put upon its third reading until it shall have been reported by the Committee on Printed Bills as correctly printed and properly engrossed.*

RULE XXX. *On the third reading of the bill, no amendment shall be in order, except to fill blanks, without unanimous consent, unless, on commitment, such amendments shall have been reported by a committee, in which case, after amendments so reported shall have been disposed of, the question shall be the same as was pending before the reference. In case the bill is amended in committee, it shall be reprinted, as amended, before final action is taken in the House.*

RULE XXXI. A register shall be kept by the Clerk of all bills introduced in the House, or transmitted for concurrence from the Senate, in which shall be recorded, under appropriate heads, the progress of such bills from the date of their introduction to the time of their transmission ; if Assembly bills, to the Governor, or, if Senate bills, their return to the Senate.

CHAPTER X.

ON MOTIONS AND THEIR PRECEDENCE.

RULE XXXII. When a question shall be under consideration, no motion shall be received except as herein specified, which motions shall have precedence in the order stated, viz.:

1. For an adjournment of the House.
2. A call of the House.
3. For the previous question.
4. To lay on the table.
5. To postpone indefinitely.
6. To postpone to a certain day.
7. To go into Committee of the Whole on the pending subject immediately.
8. To commit to a Committee of the Whole.
9. To commit to a Standing Committee.
10. To commit to a Select Committee.
11. To amend.

RULE XXXIII. A motion to reconsider any vote must be made on the same day on which the vote proposed to be reconsidered was taken, or on the legislative day next succeeding, and, except in the case of a vote on the final passage of a bill, by a member who voted in the majority. Such motion may be made under any order of business, but shall be considered only under the order of business in which the vote proposed to be reconsidered occurred. The motion to reconsider the vote on the final passage of any bill shall be privileged to any member, *but no motion for the reconsideration of any vote shall be in order after a bill, resolution, message, report, amendment or motion upon which the vote was taken shall have gone out of the possession of the House, unless subsequently recalled, and in possession of the Clerk.*

RULE XXXIV. It shall not be in order to refer any bill to a standing committee to report complete unless by the vote of two-thirds of the members present.

When a motion for reconsideration is decided, that decision shall not be reconsidered, and no question shall be twice reconsidered; *nor shall any vote be reconsidered upon either of the following motions :*

To adjourn.

To lay on the table.

To take from the table; or

For the previous question.

A motion to recall a bill from the Governor for correction may be made by or on behalf of the member who introduced the bill, under any order of business, and the votes for consideration, amendment and final passage of such bill may be taken immediately upon its return.

CHAPTER XI.

OF RESOLUTIONS.

RULE XXXV. The following classes of resolutions shall lie over one day for consideration, after which they may be called up, as of course, under their appropriate order of business :

1. All concurrent resolutions, *except resolutions in reference to adjournments and those recalling bills from the Governor or Senate, which shall be regarded as privileged.*

2. Resolutions containing calls for information on the Executive Department.

3. Resolutions giving rise to debate, except such as relate to the disposition of matters immediately before the House, such as relate to the business of the day on which they were offered, and such as relate to adjournment or taking recess for a day.

RULE XXXVI. All resolutions for printing extra copies of documents shall be referred to the Committee on Printing, who shall report on each resolution within seven days after such reference.

RULE XXXVII. All other resolutions calling for or leading to expenditures for the uses of the Legislature shall be referred to, and reported on, by the Committee on the Expenditures of the House, unless the House shall designate some other committee.

CHAPTER XII.

OF THE PREVIOUS QUESTION.

RULE XXXVIII. The "previous question" shall be put as follows : "Shall the main question now be put?" and, until it is decided, shall preclude all amendments or debate. When on taking the previous question, the House shall decide that the main question shall not now be put, the main question shall be considered as still remaining under debate. The "main question" shall be on the passage of the bill, resolution or other matter under consideration ; but when amendments are pending, the question shall first be taken.

upon such amendments in their order; and when amendments have been adopted in Committee of the Whole, and not acted on in the House, the question shall be taken upon such amendments in like order, and, if the previous question has been ordered, without further debate or amendment.

CHAPTER XIII.

OF THE ASSEMBLY CHAMBER AND THE PRIVILEGES OF ADMISSION TO THE FLOOR THEREOF.

RULE XXXIX. The use of the Assembly chamber may be granted to the State Agricultural Society, the State Medical Society and such other societies as are required by law to report to the Legislature. No application for the use of the chamber for any other purpose shall be entertained without the unanimous consent of the House.

RULE XL. The following classes of persons shall be entitled to admission to the floor of the House during the sessions thereof, viz.:

1. The Governor and Lieutenant-Governor.
2. The Members of the Senate.
3. The State officers and deputies.
4. The Regents of the University.
5. The Capitol Commissioners.
6. Persons in the exercise of an official duty directly connected with the business of the House.
7. The reporters for the press, as provided by subdivision 7 of rule 2.
8. Ex-Speakers of the Assembly.

No other person shall be admitted to the floor during the session, except upon the permission of the Speaker or by vote of the House; and persons so admitted shall be allowed to occupy places only in the seats in the rear of the Assembly chamber. All permits granted by the Speaker may be revoked by him at pleasure, or upon the order of the House.

CHAPTER XIV.

MISCELLANEOUS PROVISIONS.

RULE XLI. In all cases of the absence of members during the sessions of the House, the members present may take such measure, as they shall deem necessary to secure their presence, and *in addition to suspending them from the service of the House for a given period*, may inflict such censure or pecuniary penalty as they may deem just on those who, on being called on for that purpose, shall render not sufficient excuse for their absence.

RULE XLII. *For the purpose of securing the attendance of members, a call of the House may be made, but such call shall not be in order after the main question has been ordered, nor after the voting on any question has commenced, nor after the third reading of a bill has been completed.*

RULE XLIII. *When less than a quorum vote on any subject under the consideration of the House, it shall be the duty of the Speaker forthwith to order the bar of the House to be closed, and that the roll of members be called by the Clerk, and if it is ascertained that a quorum is present, either by answering to their names or by their presence in the House, the yeas and nays shall again be ordered by the Speaker, and if any member present refuses to vote such refusal shall be deemed a contempt, and unless purged, the Speaker shall order the Sergeant-at-Arms to remove said member or members without the bar of the House, and all privileges of membership shall be refused the person or persons so offending until the contempt be duly purged.*

RULE XLIV. *Whenever any person shall be brought before the bar of the House for adjudged breach of its privileges, no debate shall be in order, but the Speaker shall proceed to execute the judgment of the House without delay or debate.*

RULE XLV. *When the House shall be equally divided on any question, including the Speaker's vote, the question shall be deemed to be lost.*

RULE XLVI. *If any question contains several distinct propositions, it shall be divided by the chair at the request of any member, but a motion to strike out and insert shall be indivisible.*

RULE XLVII. *In all cases where a bill, order, motion or resolution shall be entered on the journal, the name of the member introducing or moving the same shall also be entered on the journal.*

RULE XLVIII. *The yeas and nays may be taken on any question whenever so required by any ten members (unless a division by yeas and nays be already pending), and when so taken shall be entered on the journal.*

RULE XLIX. *In all cases where unanimous consent is asked for advancing a bill out of its order, it shall be the duty of the Speaker to order a roll-call, for the purpose of determining if such consent will be granted.*

RULE L. *It shall be the duty of the Clerk to cause the journal of each day's proceedings of the House to be printed and laid on the table of members within two days after its approval, and, in addition to the other duties of his office, to prepare and supervise the printing of the calendars of the orders of the day, and to cause them to be placed on files before the commencement of each day's session.*

RULE LI. No reporter for the Assembly, who has an appointment as reporter in the Senate, shall receive any order for stationery from the Clerk of the Assembly.

RULE LII. No standing rule or order of the House shall be changed, suspended or rescinded unless one day's notice shall have been given of the motion therefor, nor shall such change be made unless by a vote of a majority of all the members elected to the Assembly; any such rule or order, however, may be suspended by unanimous consent. But such notice shall not be necessary on the last day of the session. The notice and motion shall in all cases state specifically the object of the suspension, and every case of suspension of a rule under such notice and motion shall be held to apply only to the object specified therein.

Such notice and motion shall be given under the order of business in which the matter proposed to be advanced by the suspension shall stand.

RULE LIII. The following committees shall each be entitled to one clerk, to be appointed by the Speaker:

Ways and Means, Judiciary, Legislation, Cities, Railroads and Counties.

And there shall be appointed general clerks to serve under direction of the Clerk of the House upon remaining committees.

RULE LIV. No persons, except members of the Legislature, and the officers thereof, shall be permitted within the Clerk's desk, or the rooms set apart for the use of the Clerk, during the session of the House, *and no member or other person shall visit or remain by the Clerk's table while the yeas and nays are being called, except officers of the House in the discharge of their duties.*

RULE LV. It shall be the duty of the stenographer of the Assembly to be present at every session of the House. He shall take stenographic notes of the debates in the House and in Committee of the Whole; and shall furnish a copy of the same written out in longhand, to any member applying therefor, upon the payment to said stenographer of ten cents for each folio, which charge said stenographer may receive in addition to his fixed compensation. The stenographic notes of the debates shall be filed with the Clerk, and shall form a portion of the archives of the House. The Clerk of the Assembly is authorized to furnish said stenographer with proper stenographic blank-books in which to record said debates, not to exceed fifty dollars for any annual session of the Legislature.

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the session, a statement of all such questions and decisions shall be printed at the close of and as an appendix to the journal.

RULE LVII. Any member requesting to be excused from voting upon the final passage of a bill or upon the passage of a resolution requiring the expenditure of money, may make, *before* the roll shall have been called, a brief statement of the reasons for making such request, not exceeding two minutes in time, and the House, without debate, shall decide if it will grant such request; but nothing in this rule contained shall abridge the right of any member to record his vote on any question previous to the announcement of the result.

RULE LVIII. Amendments proposed by the Senate and sent back to the House for concurrence shall be referred to the committee which reported the measure proposed to be amended, with power to report at any time.

RULE LIX. On the third reading of a bill, after the reading of the title and before the reading of the *text*, the bill shall be open to debate on its merits *for the period of one-half hour, until the expiration of which time the motion for the previous question shall not be in order; provided, however, that the vote may be taken at any time when the debate is closed.*

RULE LX. It shall be the duty of the Sergeant-at-Arms, at all times not to allow any person to smoke in the Assembly chamber. Subject to the direction of the Speaker, he shall enforce the rules of the House.

RULE LXI. On or before the fifth day of April, committees shall make final report upon matters referred to them prior to that day, unless further time is granted for cause, *and after that date no bills shall be introduced.*

STATE OF NEW YORK

No. 109.

IN ASSEMBLY,

MAY 16, 1889.

REPORT OF THE COMMITTEE

ON THE

RULES OF THE ASSEMBLY.

ADOPTED MAY 16, 1889.

CHAPTER I.

POWERS AND DUTIES OF THE SPEAKER.

RULE I. The Speaker shall take the chair each day at the hour to which the House shall have adjourned. He shall call to order, and, except in the absence of a quorum, shall proceed to business in the manner prescribed by these rules.

RULE II. He shall possess the powers and perform the duties herein prescribed, viz. :

1. He shall preserve order and decorum, and, in debate, shall prevent personal reflections, and confine members to the question under discussion. When two or more members rise at the same time, he shall name the one entitled to the floor.

2. He shall decide all questions of order subject to appeal to the House. On every appeal he shall have the right, in his place,

to assign his reason for his decision. *In case of such appeal no member shall speak more than once.*

3. He shall appoint all committees, except where the House shall otherwise order.

4. He may substitute any member to perform the duties of the Chair for a period not exceeding two consecutive legislative days, but for no longer period, except by special consent of the House.

5. When the House shall be ready to go into Committee of the Whole, he shall name a chairman to preside therein.

6. He shall certify the passage of all bills by the House, with the date thereof, together with the fact whether passed as majority, three-fifths or two-thirds bills, as required either by the Constitution or laws of this State.

7. He shall designate the persons who shall act as reporters for the public press, not exceeding thirty in number; but no reporter shall be admitted to the floor who is not an authorized representative of a daily paper. Such reporters, so appointed, shall be entitled to such seats as the Speaker shall designate, and shall have the right to pass to and fro from such seats in entering or leaving the Assembly chamber. *No reporter shall appear before any of the committees in advocacy of, or in opposition to any bills under consideration before such committees. A violation of this rule will be sufficient cause for the removal of such reporter. Removal for this or other cause shall be vested in the Speaker.*

8. *He shall not be required to vote in ordinary legislative proceedings, except where his vote would be decisive. In case of a tie vote the question shall be lost.*

He shall have general control, except as provided by rule or law, of the Assembly chamber and of the corridors and passages in that part of the Capitol assigned to the use of the Assembly. In case of any disturbance or disorderly conduct in the galleries, corridors or passages, he shall have power to order the same to be cleared, and may cause any person guilty of such disturbance or disorderly conduct to be brought before the bar of the House. In all such cases the members present may take such measures as they shall deem necessary to prevent a repetition of such misconduct, either by the infliction of censure or pecuniary penalty, as they may deem best, on the parties thus offending.

9. He shall also be *ex-officio* member and chairman of the Committee on Rules.

CHAPTER II.

ORDER OF BUSINESS.

RULE III. The first business of each day's session shall be the reading of the journal of the preceding day, and the correction of any errors that may be found to exist therein. *Immediately thereafter, except on days and at times set apart for the consideration of special orders, the order of business, which shall not be departed from, except by a vote of two-thirds of the members present, to be determined by a call of the roll, shall be as follows:*

1. Messages from the Governor and from the Senate, communications from State officers, reports from State institutions, and reports from the committees on Legislation and Printed and Engrossed Bills.

2. First reading of a bill and by its title and reference.

3. Reports of standing committees in their order.

4. Reports of select committees.

After the foregoing orders have been finished the following shall be the orders of the day:

For Mondays:

1. Bills on second reading.

2. Motions by counties in alphabetical order.

3. Original resolutions by counties in reverse order.

4. Unfinished business (other than bills) may be considered.

For Tuesdays:

1. Bills on third reading.

2. Bills on second reading.

For Wednesdays:

1. Bills on second reading.

2. Bills on third reading.

For Thursdays:

1. Bills on third reading.

2. Bills on second reading.

For Fridays:

1. Bills on second reading.

2. Bills on third reading.

For Saturdays:

1. Bills on second reading.

When the regular orders for any day shall be gone through, the following shall be the order of business :

1. *Bills on third reading.*
2. *Bills on second reading.*
3. *Bills on first reading.*

When the consideration of the orders of the day is not finished, those not acted upon shall be the orders for the next and each succeeding day until disposed of, and shall be entered first in the calendar, without change in their order.

CHAPTER III.

RIGHTS AND DUTIES OF MEMBERS.

RULE IV. *Petitions, memorials and remonstrances may be presented to the Clerk at the close of each day's session. Bills may be deposited, at any time during the session, before 12 o'clock noon, in a box to be known as the "bill box," which shall be under the immediate charge of the Clerk, and which shall be kept securely locked until all bills so deposited are removed by him, or by a deputy clerk duly authorized by him. Every bill shall be in duplicate, and both shall be indorsed with a statement of the title, accompanied by the name of the member introducing them. In addition to such indorsement the word "original" shall be indorsed upon one and the word "copy" upon the other.*

At the close of each day's session the bills so deposited and indorsed "original" shall be handed by the Clerk to the Speaker for his examination, after due record thereof has been entered in a book which shall be kept for that purpose. At the next regular session, as provided for in subdivision 2 of rule 3, the Speaker shall announce the introduction of all bills thus received by him, for their first reading, and thereupon shall refer them to the appropriate committees, with the consent of the House.

The bills indorsed "copy," after the originals have been entered in the record book, shall on the day of their reception be filed by the Clerk with the librarian of the Assembly, who shall keep a record thereof, which, together with the bills, shall, under his supervision, be subject to public inspection during the regular office hours of the library.

Every bill, immediately upon its introduction, shall be printed and placed on the files of the members. It shall retain its original printed number, when reprinted, together with its new number thereafter, during all stages of its progress.

RULE V. *A report of a committee must be indorsed with a statement of such report, together with the name of the committee making the same, with the amendments, if any, adopted by the committee, to be signed by the chairman; a petition, memorial or remonstrance, with a*

brief statement of its contents, accompanied by the name of the member presenting it ; a notice or resolution with his name.

RULE VI. Every member who shall be within the bar of the House when a question is stated from the chair shall vote thereon, unless he be excused by the House, or unless he be directly interested in the question; but no member shall be obliged to vote on any question unless within the bar when his name is called, *nor shall the roll of absentees be more than once called.* The bar of the House shall be deemed to include the body of the Assembly chamber.

CHAPTER IV.

OF ORDER AND DECORUM.

RULE VII. No member rising to debate, to give notice, make a motion, or report, or to present a petition or other paper, shall proceed until he shall have addressed the Speaker, and have been recognized by him.

RULE VIII. While a member is speaking, no member shall entertain any private discourse or pass between him and the chair.

RULE IX. While the Speaker is putting a question, or a count is being had, no member shall speak or leave his place.

RULE X. When a motion to adjourn is carried, the members and officers shall keep their seats and places until the Speaker declares the House adjourned.

CHAPTER V.

OF ORDER IN DEBATE.

RULE XI. No member shall speak, *except in his place, nor more than twice on any question*, without leave of the House.

RULE XII. If any member, in speaking, transgresses the rules of the House, the Speaker, or any member, may call to order, in which case the member so called to order shall immediately sit down, and shall not rise unless to explain or proceed in order.

RULE XIII. All questions relating to the priority of one question or subject-matter over another, under the same order of business, shall be decided without debate.

CHAPTER VI.

ON COMMITTEES AND THEIR DUTIES.

RULE XIV. The standing committees shall be as follows, viz.:

To consist each of eleven members :

Ways and Means.

Judiciary.

General Laws.

Legislation.
Codes.
Taxation and Retrenchment.
 Canals.
 Affairs of Cities.
 Railroads.
 Commerce and Navigation.
 Insurance.
 Banks.
Electricity, Gas and Water Supply.
 Internal Affairs.
Labor and Industries.
 Excise.
 Affairs of Villages.
 Roads and Bridges.
 Public Printing.
 Public Health.
 Public Education.
Public Buildings and Grounds.
Public Lands and Forestry.
Public Institutions.
Public Expenditures.
 Military Affairs.
Soldiers' Home.

To consist each, of nine members :

Claims.
 Federal Relations.
Miscellaneous Corporations.
 State Prisons.
Fisheries and Game.
 Privileges and Elections.
 Civil Divisions.
 Trade and Manufactures.
 Agriculture.
 Indian Affairs.

To consist each of five members :

Rules.
Printed and Engrossed bills.
Unfinished business.

RULE XV. It shall be the duty of each of the several committees to consider and report without unnecessary delay upon the respective bills and other matters referred to it by the House ; and also to inquire into the matters indicated by its name, and to report thereon to the House any information and any bill or resolution which it may deem conducive to the public interest. *No bill affecting the rights of individuals, or of private or municipal corporations, otherwise than as it affects generally the people of the whole State, shall be reported by a committee, unless it is made to appear to the satisfaction of the committee that notice has been given, by public advertisement or otherwise, to all parties interested, without expense to the State, or unless evidence satisfactory to the committee is produced that the parties interested have in writing waived notice. In case the bill affects the rights of a municipal corporation, such notice shall be given to the mayor, in cities, and to the president of the board of trustees, in villages.*

RULE XVI. *The Committee on Legislation shall examine and correct the bills which are referred to it, for the purpose of avoiding repetitions and unconstitutional provisions, insuring accuracy in the text and references, and consistency with the language of the existing statutes. It shall also report whether the object sought to be accomplished can be secured without a special act, under existing laws, or without detriment to the public interests, by the enactment of a general law (provided, that any change in the sense or legal effect, or any material change in construction, shall be reported to the House as a recommendation and not as an amendment).*

CHAPTER VII.

OF THE SPECIAL ORDERS.

RULE XVII. *Any matter may be made a special order for any particular day, by the assent of two-thirds of the members present. When so made, a similar vote shall be requisite to rescind or postpone.*

CHAPTER VIII.

OF THE COMMITTEE OF THE WHOLE.

RULE XVIII. *Any matter may be committed to the Committee of the Whole, by the assent of two-thirds of the members present.*

RULE XIX. The same rules shall be observed in Committee of the Whole as in the House, so far as the same are applicable, except that the previous question shall not apply, nor the yeas and nays be taken.

RULE XX. A motion to rise and report progress shall be in order at any stage, and shall be decided without debate.

RULE XXI. Bills and other matters shall be considered in Committee of the Whole in the following manner, viz.: They shall be first read through, if the committee so direct; otherwise they shall be read and considered by sections, leaving the title to be last considered. All amendments, in their proper connections, shall be reported to the House by the Chairman. Bills reported by the Committee of the Whole shall be subject to debate before the question to agree with the committee in their report is put; but such amendments only shall be in order as were offered in Committee of the Whole, and where a bill shall be reported by the Committee of the Whole with the enacting clause stricken out, and the report shall be agreed to by the House, or a report favorable to the passage of a bill shall be disagreed to by a vote of the House, such bill shall be considered as rejected.

RULE XXII. If at any time when in Committee of the Whole house, it be ascertained that there is no quorum, the Chairman shall immediately report the fact to the Speaker.

CHAPTER IX.

OF BILLS.

RULE XXIII. No bill shall be introduced in the House except in one of the following modes, viz.:

1. *As specified in Rule 4.*
2. By report of a committee.
3. By order of the House.
4. By message from the Senate.

RULE XXIV. No private bill shall be introduced, but upon a memorial or petition presented to the House and signed *and verified* by the party or parties praying for the passage of the same, except by order of the House.

RULE XXV. Every message from the Senate, communicating any bill for the concurrence of the House, shall, with the accompanying documents, if any, be referred to a standing or select committee to consider and report thereon, and every such message communicating an amendment, shall be referred to the committee which reported the measure proposed to be amended, with power to report at any time.

RULE XXVI. All bills, whether introduced in the House or communicated by message from the Senate, shall, after their *first* reading, be referred to a standing or select committee, to consider and report thereon. Such committee may report any bill, either with or without amendments, or they may report against the same. *All bills reported*

favorably or for consideration shall be immediately printed, and if reported with amendments, the amendments proposed by the committee shall be printed in italics, except in cases where the committee recommend striking out certain words, in which case they shall be printed "Stricken through."

All bills favorably reported shall, if the report be agreed to, be placed on the order of second reading ; but where a bill has been reported adversely, and such report shall be agreed to by the House, it shall be considered as rejected. No committee shall be discharged from the consideration of a bill thus referred until the committee has had a meeting subsequent to its reference, and has neglected to consider the bill ; nor shall an adverse report be received unless the introducer of the bill has first had an opportunity to be heard.

RULE XXVII. *Bills on the order of second reading shall be subject to debate before the motion to order them to a third reading is entertained ; such bills shall be considered section by section. The main question, if ordered, shall apply only to the section at the time under consideration. After the bill has been thus read through, one-half hour shall be allowed for debate, but no person shall speak more than fifteen minutes, except by consent of the House.*

RULE XXVIII. *Every bill shall receive three separate readings, and on three different days, previous to its passage, except by unanimous consent.*

RULE XXIX. *All bills amended on second reading shall be reprinted before they are read a third time, and no bill shall be put upon its third reading until it shall have been reported by the Committee on Printed Bills as correctly printed and properly engrossed.*

RULE XXX. *On the third reading of the bill, no amendment shall be in order, except to fill blanks, without unanimous consent, unless, on commitment, such amendments shall have been reported by a committee, in which case, after amendments so reported shall have been disposed of, the question shall be the same as was pending before the reference. In case the bill is amended in committee, it shall be reprinted, as amended, before final action is taken in the House.*

RULE XXXI. A register shall be kept by the Clerk of all bills introduced in the House, or transmitted for concurrence from the Senate, in which shall be recorded, under appropriate heads, the progress of such bills from the date of their introduction to the time of their transmission ; if Assembly bills, to the Governor, or, if Senate bills, their return to the Senate.

CHAPTER X.

ON MOTIONS AND THEIR PRECEDENCE.

RULE XXXII. When a question shall be under consideration, no motion shall be received except as herein specified, which motions shall have precedence in the order stated, viz.:

1. For an adjournment of the House.
2. A call of the House.
3. For the previous question.
4. To lay on the table.
5. To postpone indefinitely.
6. To postpone to a certain day.
7. To go into Committee of the Whole on the pending subject immediately.
8. To commit to a Committee of the Whole.
9. To commit to a Standing Committee.
10. To commit to a Select Committee.
11. To amend.

RULE XXXIII. A motion to reconsider any vote must be made on the same day on which the vote proposed to be reconsidered was taken, or on the legislative day next succeeding, and, except in the case of a vote on the final passage of a bill, by a member who voted in the majority. Such motion may be made under any order of business, but shall be considered only under the order of business in which the vote proposed to be reconsidered occurred. The motion to reconsider the vote on the final passage of any bill shall be privileged to any member, *but no motion for the reconsideration of any vote shall be in order after a bill, resolution, message, report, amendment or motion upon which the vote was taken shall have gone out of the possession of the House, unless subsequently recalled, and in possession of the Clerk.*

RULE XXXIV. It shall not be in order to refer any bill to a standing committee to report complete unless by the vote of two-thirds of the members present.

When a motion for reconsideration is decided, that decision shall not be reconsidered, and no question shall be twice reconsidered; *nor shall any vote be reconsidered upon either of the following motions:*

To adjourn.

To lay on the table.

To take from the table; or

For the previous question.

A motion to recall a bill from the Governor for correction may be made by or on behalf of the member who introduced the bill, under any order of business, and the votes for consideration, amendment and final passage of such bill may be taken immediately upon its return.

CHAPTER XI.

OF RESOLUTIONS.

RULE XXXV. The following classes of resolutions shall lie over one day for consideration, after which they may be called up, as of course, under their appropriate order of business :

1. All concurrent resolutions, *except resolutions in reference to adjournments and those recalling bills from the Governor or Senate, which shall be regarded as privileged.*

2. Resolutions containing calls for information on the Executive Department.

3. Resolutions giving rise to debate, except such as relate to the disposition of matters immediately before the House, such as relate to the business of the day on which they were offered, and such as relate to adjournment or taking recess for a day.

RULE XXXVI. All resolutions for printing extra copies of documents shall be referred to the Committee on Printing, who shall report on each resolution within seven days after such reference.

RULE XXXVII. All other resolutions calling for or leading to expenditures for the uses of the Legislature shall be referred to, and reported on, by the Committee on the Expenditures of the House, unless the House shall designate some other committee.

CHAPTER XII.

OF THE PREVIOUS QUESTION.

RULE XXXVIII. The "previous question" shall be put as follows : "Shall the main question now be put?" and, until it is decided, shall preclude all amendments or debate. When on taking the previous question, the House shall decide that the main question shall not now be put, the main question shall be considered as still remaining under debate. The "main question" shall be on the passage of the bill, resolution or other matter under consideration ; but when amendments are pending, the question shall first be taken upon such amendments in their order ; and when amendments have been adopted in Committee of the Whole, and not acted on in the House, the question shall be taken upon such amendments in like order, and, if the previous question has been ordered, without further debate or amendment.

CHAPTER XIII.

OF THE ASSEMBLY CHAMBER AND THE PRIVILEGES OF ADMISSION TO THE FLOOR THEREOF.

RULE XXXIX. The use of the Assembly chamber may be granted to the State Agricultural Society, the State Medical Society and such other societies as are required by law to report to the Legislature. No application for the use of the chamber for any other purpose shall be entertained without the unanimous consent of the House.

RULE XL. The following classes of persons shall be entitled to admission to the floor of the House during the sessions thereof, viz.:

1. The Governor and Lieutenant-Governor.
2. The Members of the Senate.
3. The State officers and deputies.
4. The Regents of the University.
5. The Capitol Commissioners.
6. Persons in the exercise of an official duty directly connected with the business of the House.
7. The reporters for the press, as provided by subdivision 7 of rule 2.
8. Ex-Speakers of the Assembly.

No other person shall be admitted to the floor during the session, except upon the permission of the Speaker or by vote of the House; and persons so admitted shall be allowed to occupy places only in the seats in the rear of the Assembly chamber. All permits granted by the Speaker may be revoked by him at pleasure, or upon the order of the House.

CHAPTER XIV.

MISCELLANEOUS PROVISIONS.

RULE XLI. In all cases of the absence of members during the sessions of the House, the members present may take such measure, as they shall deem necessary to secure their presence, and *in addition to suspending them from the service of the House for a given period*, may inflict such censure or pecuniary penalty as they may deem just on those who, on being called on for that purpose, shall render not sufficient excuse for their absence.

RULE XLII. *For the purpose of securing the attendance of members, a call of the House may be made, but such call shall not be in order after the main question has been ordered, nor after the voting on any question has commenced, nor after the third reading of a bill has been completed.*

RULE XLIII. *When less than a quorum vote on any subject under the consideration of the House, it shall be the duty of the Speaker forthwith to order the bar of the House to be closed, and that the roll of members be called by the Clerk, and if it is ascertained that a quorum is present, either by answering to their names or by their presence in the House, the yeas and nays shall again be ordered by the Speaker, and if any member present refuses to vote such refusal shall be deemed a contempt, and unless purged, the Speaker shall order the Sergeant-at-Arms to remove said member or members without the bar of the House, and all privileges of membership shall be refused the person or persons so offending until the contempt be duly purged.*

RULE XLIV. Whenever any person shall be brought before the bar of the House for adjudged breach of its privileges, no debate shall be in order, but the Speaker shall proceed to execute the judgment of the House without delay or debate.

RULE XLV. When the House shall be equally divided on any question, including the Speaker's vote, the question shall be deemed to be lost.

RULE XLVI. If any question contains several distinct propositions, it shall be divided by the chair at the request of any member, but a motion to strike out and insert shall be indivisible.

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RULE XLVIII. The yeas and nays may be taken on any question whenever so required by any ten members (unless a division by yeas and nays be already pending), and when so taken shall be entered on the journal.

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RULE L. It shall be the duty of the Clerk to cause the journal of each day's proceedings of the House to be printed and laid on the table of members within two days after its approval, and, in addition to the other duties of his office, to prepare and supervise the printing of the calendars of the orders of the day, and to cause them to be placed on files before the commencement of each day's session.

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RULE LII. No standing rule or order of the House shall be changed, suspended or rescinded unless one day's notice shall have been given

of the motion therefor, nor shall such change be made unless by a vote of a majority of all the members elected to the Assembly; any such rule or order, however, may be suspended by unanimous consent. But such notice shall not be necessary on the last day of the session. The notice and motion shall in all cases state specifically the object of the suspension, and every case of suspension of a rule under such notice and motion shall be held to apply only to the object specified therein.

Such notice and motion shall be given under the order of business in which the matter proposed to be advanced by the suspension shall stand.

RULE LIII. The following committees shall each be entitled to one clerk, to be appointed by the Speaker:

Ways and Means, Judiciary, Legislation, Cities, Railroads and Counties.

And there shall be appointed general clerks to serve under direction of the Clerk of the House upon remaining committees.

RULE LIV. No persons, except members of the Legislature, and the officers thereof, shall be permitted within the Clerk's desk, or the rooms set apart for the use of the Clerk, during the session of the House, *and no member or other person shall visit or remain by the Clerk's table while the yeas and nays are being called, except officers of the House in the discharge of their duties.*

RULE LV. It shall be the duty of the stenographer of the Assembly to be present at every session of the House. He shall take stenographic notes of the debates in the House and in Committee of the Whole; and shall furnish a copy of the same written out in longhand, to any member applying therefor, upon the payment to said stenographer of ten cents for each folio, which charge said stenographer may receive in addition to his fixed compensation. The stenographic notes of the debates shall be filed with the Clerk, and shall form a portion of the archives of the House. The Clerk of the Assembly is authorized to furnish said stenographer with proper stenographic blank-books in which to record said debates, not to exceed fifty dollars for any annual session of the Legislature.

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RULE LVII. Any member requesting to be excused from voting upon the final passage of a bill or upon the passage of a resolution requiring the expenditure of money, may make, *before the roll shall*

have been called, a brief statement of the reasons for making such request, not exceeding two minutes in time, and the House, without debate, shall decide if it will grant such request; but nothing in this rule contained shall abridge the right of any member to record his vote on any question previous to the announcement of the result.

RULE LVIII. Amendments proposed by the Senate and sent back to the House for concurrence shall be referred to the committee which reported the measure proposed to be amended, with power to report at any time.

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RULE LXI. On or before the fifth day of April, committees shall make final report upon matters referred to them prior to that day, unless further time is granted for cause, *and after that date no bills shall be introduced.*

R E P O R T

OF THE

SUPERINTENDENT OF PUBLIC WORKS,

ON

TRADE AND TONNAGE OF CANALS

FOR THE YEAR 1888.

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IN ASSEMBLY,

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REPORT

OF THE

SUPERINTENDENT OF PUBLIC WORKS UPON THE TRADE AND TONNAGE OF THE CANALS FOR THE YEAR 1888.

The whole number of tons carried upon the canals of this State during the season of 1888 was 4,942,948, and was composed of the following described class of articles, viz.:

	Tons.
Product of the forest.....	1,389,728
Agriculture	1,177,587
Manufactures	153,905
Merchandise	206,437
Other articles	2,015,291
Total	4,942,948

Which was composed of the following described articles:

	Tons.
Boards and scantling.....	1,181,978
Shingles	6,044
Timber	488,898
Staves	13,727
Wood	134,821
Ashes, pot and pearl	1,519
Ashes, leached.....	2,741
Pork	80
Beef.....	38

	Tons.
Cheese.....	5
Butter.....	1
Lard, tallow and lard oil.....	21
Wool.....	8
Hides.....	276
Flour.....	3,287
Wheat.....	491,419
Rye.....	12,532
Corn.....	499,218
Corn meal.....	283
Barley.....	41,100
Barley malt.....	14,773
Oats.....	70,315
Bran and ship stuff.....	4,821
Peas and beans.....	1,918
Apples.....	6,965
Potatoes.....	19,811
Dried fruit.....	799
Unmanufactured tobacco.....	3
Hemp.....	970
Clover and grass seed.....	326
Flax-seed.....	8,618
Domestic spirits.....	188
Oil meal and cake.....	1,429
Leather.....	574
Furniture.....	103
Bar and pig lead.....	4
Pig iron.....	35,653
Bloom and bar iron.....	5,442
Castings and iron-ware.....	4,143
Domestic cottons.....	25
Domestic salt.....	98,687
Foreign salt.....	7,657
Sugar.....	4,004
Molasses.....	3,169
Coffee.....	28
Nails, spikes and horse-shoes.....	783
Iron and steel.....	43,881
Railroad iron.....	2,596
Flint enamel crockery, etc.....	1,089
All other merchandise.....	150,887
Stone, lime and clay.....	484,244

	Tons. .
Gypsum.....	2,073
Rock and superphosphate	16,341
Anthracite coal.....	1,166,926
Bituminous coal... ..	52,754
Petroleum.....	583
Iron ore.....	259,269
Sundries.....	33,101

Total	4,942,948
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Of the total amount of freight the Erie canal carried....	3,321,116
Champlain.....	1,168,304
Oswego.....	134,078
Cayuga and Seneca.....	201,237
Black River.....	118,213

Total	4,942,948
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Of the above tonnage 3,454,764 tons went east and 1,488,184 tons went west; total, 4,942,948 tons.

Of this amount there was 2,190,539 tons way freight and 2,752,409 tons through freight; total, 4,942,948 tons.

In 1887 the canals carried 5,553,805 tons, which was 610,857 tons more than was transported during the past year. The following statement shows the separate tonnage of each canal for the years 1887 and 1888 with the gain or loss each year:

	1888.	1887.	Gain, 1888.	Loss, 1888.
Erie	3,321,116	3,840,513	.....	519,397
Champlain	1,168,304	1,229,335	.....	61,031
Oswego	134,078	176,177	.....	42,099
Cayuga and Seneca..	201,237	195,933	5,304	.....
Black River	118,213	111,847	6,366	.....
Totals	4,942,948	5,553,805	11,670	622,527

The tonnage of the canals for the season of 1887 was composed of the following described class of articles:

	Tons.
Product of the forest.....	1,529,809
Agriculture	1,590,509

	Tons.
Manufactures	212,216
Merchandise	378,734
Other articles.....	1,842,537
Total.....	<u>5,553,805</u>

Which was composed of the following articles:

	Tons.
Fur and peltry	8
Boards and scantling.....	1,331,149
Shingles	4,255
Timber	43,276
Staves	14,679
Wood	125,131
Ashes, pot and pearl	1,100
Ashes, leached	10,193
Pork	120
Beef.....	11
Cheese	11
Butter.....	1
Lard, tallow and lard oil	58
Wool	19
Hides	341
Flour	4,089
Wheat.....	936,840
Rye	6,717
Corn	446,617
Corn meal	7
Barley.....	75,458
Barley malt	13,287
Oats.....	35,365
Bran and shipstuff.....	3,342
Peas and beans.....	424
Apples	5,856
Potatoes	23,730
Dried fruit.....	1,030
Unmanufactured tobacco	16
Hemp	429
Clover and grass seed.....	539
Flax seed	36,193
Domestic spirits.....	987
Oil meal and cake	5,235

	Tons.
Leather	633
Furniture.....	71
Bar and pig lead	326
Pig iron	58,569
Bloom and bar iron.....	19,995
Castings and ironware.....	2,316
Domestic cottons	30
Domestic salt	113,022
Foreign salt	11,032
Sugar	14,714
Molasses.....	7,367
Coffee	1,739
Nails, spikes and horse shoes	1,266
Iron and steel	162,833
Railroad iron.....	21,368
Flint, crockery and glass-ware	2,374
All other merchandise.....	167,046
Copper ore.....	31
Stone, lime and clay	607,117
Gypsum	3,823
Rock and super-phosphates.....	20,790
Anthracite coal.....	866,471
Bituminous coal	38,953
Petroleum	475
Iron ore	243,578
Sundries.....	61,299
Total tons.....	5,553,805

The following statement shows the amount of property cleared upon the canal each week during the season of 1888:

ANNUAL ACCOUNT of property in tons cleared upon the canals each week during the season of 1888.

DAYS.	THE FOREST—PRODUCT OF WOOD.					
	Ashes, leached.	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.
Eighth to fourteenth .....	.....	25,941	113	309	.....	641
Fifteenth to twenty-second..	.....	34,563	125	1,089	424	2,279
Twenty-third to close .....	.....	59,286	158	2,398	378	2,593
Total, May .....	.....	119,790	396	3,796	802	5,113
First to seventh .....	.....	40,956	166	1,577	626	4,130
Eighth to fourteenth .....	.....	43,626	177	2,300	172	2,892
Fifteenth to twenty-second..	.....	51,064	216	1,870	.....	3,374
Twenty-third to close	450	59,953	237	898	603	4,883
Total, June	450	195,599	796	6,645	1,401	193
First to seventh .....	.....	44,260	77	1,308	481	2,526
Eighth to fourteenth .....	.....	32,849	171	1,228	1,421	2,604
Fifteenth to twenty-second..	526	36,846	192	2,456	566	2,489
Twenty-third to close .....	.....	43,243	116	3,167	667	6,112
Total, July	526	157,198	556	8,159	3,135	13,731

First to seventh.....	1,082	38,484	359	1,941	1,439	4,466	.....
Eighth to fourteenth.....	.....	34,595	271	1,200	173	3,301	419
Fifteenth to twenty-second..	235	47,816	493	1,152	372	5,437	.....
Twenty-third to close.....	.....	53,048	281	1,869	453	5,662	113
Total, August.....	1,317	173,940	1,404	6,162	2,437	18,866	532

First to seventh.....	.....	42,835	425	1,657	474	2,786	.....
Eighth to fourteenth.....	238	45,445	175	5,408	537	9,503	.....
Fifteenth to twenty-second..	210	47,750	287	1,633	310	4,024	244
Twenty-third to close.....	.....	53,823	322	1,889	467	4,699	.....
Total, September.....	448	189,853	1,209	10,587	1,788	21,012	244

First to seventh.....	.....	37,194	227	896	282	3,024	.....
Eighth to fourteenth.....	.....	39,363	198	2,200	150	5,771	.....
Fifteenth to twenty-second..	.....	59,097	400	2,875	150	4,020	.....
Twenty-third to close.....	.....	57,114	178	1,681	306	5,530	.....
Total, October ...	.....	192,798	1,003	7,652	888	18,345	.....

First to seventh.....	.....	48,467	99	260	90	2,696	.....
Eighth to fourteenth.....	.....	36,898	106	262	196	1,330	.....

Annual account of property in tons cleared — (Continued).

DAYS.	THE FOREST — PRODUCT OF WOOD.						
	Ashes, leached.	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.
Fifteenth to twenty-second.	45,649	385	4,012	331	3,483	.....
Twenty-third to close.....	16,855	90	447	75	4,516	550
Total, November	147,869	680	4,981	692	12,025	550
Agents, Brewster.....	135	.....	.....
Russell.	4,931	.....	916	2,449	30,050	.....
Total for year.....	2,741	1,181,978	6,044	48,898	13,727	134,821	1,519

Annual account of property in tons cleared — (Continued).

DAYS.	PRODUCT OF ANIMALS.							AGRICULTURE — VEGETABLE FOOD.		
	Pork.	Beef.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.
Eighth to fourteenth .....		....	....	....	.....	....	10	47	9,608	722
Fifteenth to twenty-second..	7	....	....	....	.....	....	36	104	26,508	722
Twenty-third to close	2	....	....	....	.....	....	.....	226	37,364	.....
Total, May.....	9	....	....	....	.....	....	46	377	73,480	1,444
First to seventh	2	....	....	....	.....	....	23	90	20,241	647
Eighth to fourteenth .....	....	....	....	....	.....	....	21	42	13,218	.....
Fifteenth to twenty-second..	2	....	....	....	.....	....	.....	99	5,435	476
Twenty-third to close .....	.....	....	....	....	.....	....	13	105	8,573	845
Total, June.....	4	....	....	....	.....	....	57	336	47,467	1,968
First to seventh	10	....	....	....	.....	....	14	103	12,273	17
Eighth to fourteenth	5	20	....	....	4	....	.....	94	5,112	.....
Fifteenth to twenty-second..	5	....	....	....	1	....	19	169	10,293	.....
Twenty-third to close	2	....	....	....	.....	....	29	104	8,754	.....
Total, July.....	22	20	....	....	5	....	62	470	36,432	17

Annual account of property in tons cleared — (Continued).

DAYS.	PRODUCT OF ANI							AGRICULTURE—VEGETABLE FOOD.		
	Pork.	Beef.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.
First to seventh.....	3	....	....	....	2	....	7	184	11,465	.....
Eighth to fourteenth.....	1	....	....	1	....	....	....	133	30,001	.....
Fifteenth to twenty-second..	4	....	....	....	....	....	14	37	25,024	.....
Twenty-third to close.....	5	18	....	....	3	....	27	239	46,239	456
Total, August.....	13	18	....	1	5	....	48	593	112,729	456
First to seventh.....	3	....	....	....	....	....	....	40	42,201	.....
Eighth to fourteenth.....	3	....	....	....	....	....	22	154	32,381	232
Fifteenth to twenty-second..	.....	....	5	....	....	....	27	163	26,608	2,170
Twenty-third to close.....	9	....	....	....	....	....	....	43	23,559	851
Total, September.....	15	....	5	....	....	....	49	400	124,749	3,253
First to seventh.....	1	....	....	....	....	....	....	105	24,890	.....
Eighth to fourteenth.....	6	....	....	....	4	....	6	132	15,675	.....
Fifteenth to twenty-second..	1	....	....	....	....	....	....	243	11,848	223
Twenty-third to close.....	4	....	....	....	1	8	....	239	8,617	.....
Total, October.....	12	....	....	....	5	8	6	719	61,030	223

AGRICULTURE — VEGETABLE FOOD.

DAYS.

Corn.	Corn meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and Beans.	Apples.	Potatoes.	Dried fruit.
3,025	...	102	1,751	3,558	13	.....	.....	.....	182
10,198	...	442	556	9,788	36	.....	.....	..... 5	355
20,275	...	159	367	8,136	188	.....	.....	.....	43
Total, May.....	...	793	2,674	21,482	237	.....	.....	5	580

14,553	...	.....	784	619	214	120	.....	.....	51
19,329	...	.....	371	6,226	47	96	.....	.....	.....
13,200	...	167	170	8,897	58	6	.....	.....	16
5,764	...	.....	595	5,199	158	.....	.....	.....	1
Total, June.....	...	167	1,920	20,941	477	222	.....	.....	68

19,240	...	.....	744	3,591	47	703	.....	.....	...
8,431	4	264	.....	749	156	10	.....	.....	60
15,696	1	.....	1,250	1,922	179	17	.....	.....	13
14,242	...	535	921	580	156	.....	.....	.....	.....
Total, July.....	5	799	2,915	6,842	538	730	.....	.....	73

First to seventh	18,306	...	.....	2,128	449	303	.....	.....	.....
Eighth to fourteenth	19,965	...	.....	.....	693	168	.....	.....	.....
Fifteenth to twenty-second ..	21,231	...	.....	374	423	50	.....	.....	.....
Twenty-third to close	18,824	54	.....	701	274	199	.....	.....	.....
Total, August	78,326	54	.....	3,203	1,839	720	.....	.....	.....

First to seventh	8,454	4	.....	380	646	178	.....	.....	.....
Eighth to fourteenth	24,499	54	.....	383	1,561	170	.....	.....	.....
Fifteenth to twenty-second ..	21,631	...	240	192	1,596	300	.....	.....	.....
Twenty-third to close	30,746	...	515	535	1,036	245	.....	.....	78
Total, September	85,330	58	755	1,490	4,839	893	.....	.....	78

First to eighth	22,973	1	3,361	315	992	62	.....	5	.....
Eighth to fourteenth	29,059	162	3,312	392	2,319	81	240	29	.....
Fifteenth to twenty-second ..	30,764	2	4,939	756	2,184	205	471	213	.....
Twenty-third to close	22,091	....	6,307	.....	840	385	255	198	.....
Total, October	104,887	165	17,919	1,463	6,335	733	966	445	.....

First to seventh	36,193	...	5,451	145	510	169	.....	821	855
Eighth to fourteenth	36,113	1	3,469	.....	3,035	126	.....	2,442	5,253

Annual account of property in tons cleared — (Continued).

DAYS.	AGRICULTURE — VEGETABLE FOOD.									
	Corn.	Corn. meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Fifteenth to twenty-second..	14,116	...	8,896	196	4,262	567	.....	2,348	7,749	.....
Twenty-third to close.....	300	...	2,941	767	230	361	.....	909	5,949	.....
Total, November.....	86,722	1	20,757	1,108	8,037	1,223	.....	6,520	19,806	. ...
Agents, Brewster.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....
Russell.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....
Total for year.....	499,218	283	41,100	14,773	70,315	4,821	1,918	6,965	19,811	799

Annual account of property in tons cleared — (Continued).

DAYS.	ALL OTHER AGRICULTURAL PRODUCTS.					MANUFACTURES.				
	Unmanu- factured tobacco.	Hemp.	Clover and grass seed.	Flax seed.	Domestic spirits.	Oil meal and cake.	Leather.	Furni- ture.	Bar and pig lead.	Pig iron.
Eight to fourteenth.....	324	168	14	....	15	....	906
Fifteenth to twenty-second...	28	148	3	.....	45	7	....	1,303
Twenty-third to close.....	60	18	.....	30	45	....	....	1,295
Total, May.....	88	490	171	44	90	22	....	3,504
First to seventh.....	89	112	.....	206	....	....	....	1,334
Eighth to fourteenth.....	15	.....	.....	.....	220	40	9	....	890
Fifteenth to twenty-second...	69	224	.....	228	40	3	....	1,615
Twenty-third to close.....	1	112	.....	3	88	5	....	1,130
Total, June.....	15	159	448	.....	657	168	17	....	4,969
First to seventh.....	36	.....	112	.....	.....	....	....	....	1,831
Eighth to fourteenth.....	7	.....	37	....	....	2,024
Fifteenth to twenty-second...	3	.....	354	32	2	....	4,662
Twenty-third to close.....	525	42	.....	.....	10	....	....	....	3,002
Total, July.....	561	42	115	7	364	69	2	....	11,519

Annual account of property in tons cleared — (Continued).

DAYS.	ALL OTHER AGRICULTURAL PRODUCTS.					MANUFACTURES.				
	Unmanu- factured tobacco.	Hemp.	Clover and grass seed.	Flax seed.	Domestic spirits.	Oil meal and cake.	Leather.	Furni- ture.	Bar and pig lead.	Pig iron.
First to seventh	38	.....	.....	.....	20	37	.....	.....	1,238
Eighth to fourteenth	79	.....	.....	969
Fifteenth to twenty-second	17	.....	91	32	.....	.....	1,459
Twenty-third to close	37	.....	10	.....	.....	4	3	717
Total, August	38	37	17	10	111	148	4	3	4,383
First to seventh	3	.....	.....	238	.....	.....	29	.....	.....	582
Eighth to fourteenth	1,603	.....	.....	32	6	.....	572
Fifteenth to twenty-second	255	.....	866	.....	.....	.....	3	1	801
Twenty-third to close	7	.....	1,347	.....	.....	38	4	.....	1,431
Total, September	3	262	.....	4,054	.....	.....	99	13	1	3,386
First to seventh	935	.....	.....	.....	.....	.....	1,103
Eighth to fourteenth	1,367	.....	128	.....	2	.....	998
Fifteenth to twenty-second	496	.....	.....	.....	4	.....	944
Twenty-third to close	94	.....	238	.....	.....	.....	.....	.....	1,534
Total, October	94	.....	3,036	.....	128	.....	6	.....	4,579

Annual account of property in tons cleared — (Continued).

DAYS.	MANUFACTURES.					MERCHANDISE.		
	Castings and iron ware.	Bloom iron.	Domestic cottons.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.
Eighth to fourteenth	679	6	.....	3,147	884	924	80	.....
Fifteenth to twenty-second	49	3	.....	3,528	334	71	138	.....
Twenty-third to close	33	319	.....	4,168	30	131	59	.....
Total, May	761	328	.....	10,843	1,248	1,126	277	.....
First to seventh	16	190	.....	1,947	134	3	.....	.....
Eighth to fourteenth	292	224	.....	1,057	.....	71	39	.....
Fifteenth to twenty-second	50	.....	.....	1,900	101	33	219	.....
Twenty-third to close	72	4	23	2,223	.....	9	395	.....
Total, June	430	418	23	7,127	235	116	653	.....
First to seventh	332	111	.....	6,532	137	92	441	.....
Eighth to fourteenth	10	48	.....	3,779	281	132	332	.....
Fifteenth to twenty-second	339	.....	2	2,676	544	1	246	.....
Twenty-third to close	300	151	.....	6,405	42	76	377	28
Total, July	981	310	2	19,392	1,004	301	1,396	28

First to seventh	135	279	.....	2,718	783	14	368	.....
Eighth to fourteenth .....	.....	187	.....	1,328	627	12	172	.....
Fifteenth to twenty-second	373	331	.....	1,458	359	468	.....	.....
Twenty-third to close	261	252	.....	6,834	745	42	40	.....
Total, August	769	1,049	.....	12,338	2,514	536	580	.....

First to seventh	285	120	.....	1,281	114	849	124	.....
Eighth to fourteenth	5	140	.....	2,922	164	732	4	.....
Fifteenth to twenty-second	185	963	.....	2,075	216	59	65	.....
Twenty-third to close	92	582	.....	6,102	146	22	.....	.....
Total, September	567	1,805	.....	12,386	640	1,662	193	.....

First to seventh	145	151	.....	2,608	.....	1	11	.....
Eighth to fourteenth	137	.....	.....	3,105	487	37	1	.....
Fifteenth to twenty-second .....	.....	274	.....	2,863	.....	7	5	.....
Twenty-third to close	318	313	.....	6,154	733	108	38	.....
Total, October	600	745	.....	14,730	1,220	153	55	.....

First to seventh .....	.....	134	.....	2,458	760	.....	.....	.....
Eighth to fourteenth	2	227	.....	1,236	14	59	.....	.....

Annual account of property in tons cleared — (Continued).

DAYS.	MANUFACTURES.					MERCHANDISE.		
	Castings and iron ware.	Bloom iron.	Domestic cottons.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.
Fifteenth to twenty-second	33	426	.....	5,005	22	3	15	.....
Twenty-third to close .....	.....	.....	.....	8,728	.....	48	.....	.....
Total, November	35	787	.....	17,427	796	110	15	.....
Agents, Brewster .....	.....	.....	.....	4,450	.....	.....	.....	.....
Russell .....	.....	.....	.....	.....	.....	.....	.....	.....
Total for year	4,143	5,442	25	98,687	7,657	4,004	3,169	28

Annual account of property in tons cleared — (Continued).

DAYS.	MERCHANDISE.					OTHER ARTICLES.		
	Nails, spikes and horseshs.	Iron and steel.	Railroad iron.	Flint enamel, crockery and glassware.	All other merchandise.	Phosphate.	Stone, lime and clay.	Gypsum.
Eighth to fourteenth .....	.....	3,292	.....	.....	13,195	224	19,369	.....
Fifteenth to twenty-second	137	2,242	.....	26	9,164	449	17,746	291
Twenty-third to close .....	.....	1,475	.....	170	5,180	313	18,820	1,091
Total, May	137	7,009	.....	196	27,539	986	55,935	1,382
First to seventh	2	1,438	.....	49	4,236	560	20,059	.....
Eighth to fourteenth .....	.....	2,528	.....	7	5,777	547	11,754	100
Fifteenth to twenty-second .....	.....	1,445	.....	27	5,620	268	16,991	.....
Twenty-third to close .....	.....	1,978	58	1	4,547	670	20,874	.....
Total, June	2	6,389	58	84	20,180	2,045	69,678	100
First to seventh	77	2,390	.....	480	4,442	849	14,737	131
Eighth to fourteenth	6	483	.....	17	5,983	212	7,792	.....
Fifteenth to twenty-second .....	.....	1,554	.....	1	4,610	873	10,604	.....
Twenty-third to close	105	2,266	.....	43	4,854	1,107	20,908	.....
Total, July	188	6,293	.....	541	19,889	3,041	54,041	131

Annual account of property in tons cleared — (Continued).

DAYS.	MERCHANDISE.					OTHER ARTICLES.		
	Nails, spikes and horsesh's.	Iron and steel.	Railroad iron.	Flint enamel, crockery and glassware.	All other merchandise.	Phosphate.	Stone, lime and clay.	Gypsum.
First to seventh .....	.....	479	.....	84	2,712	202	15,391	.....
Eighth to fourteenth	2.	519	....	6	3,122	867	12,617	.....
Fifteenth to twenty-second	25	1,431	.....	17	6,258	213	17,860	.....
Twenty-third to close	29	2,079	560	5	5,641	729	24,960	.....
Total, August	56	4,508	560	112	17,733	2,011	70,828	.....
First to seventh	30	1,485	112	3	3,345	458	20,686	.....
Eighth to fourteenth .....	.....	1,473	.....	.....	5,859	454	14,464	.....
Fifteenth to twenty-second	4	1,621	.....	40	8,080	250	15,752	460
Twenty-third to close	3	3,724	388	1	6,884	811	18,196	.....
Total, September	37	8,303	500	44	24,168	1,973	69,098	460
First to seventh	24	2,024	643	5	4,034	435	24,165	.....
Eighth to fourteenth	63	2,089	252	33	5,664	534	17,673	.....
Fifteenth to twenty-second	156	2,507	34	6	7,856	1,656	15,579	.....
Twenty-third to close	25	1,526	291	8	7,946	939	26,735	.....
Total, October	268	8,146	1,220	52	25,500	3,564	84,152	.....

First to seventh.....	95	2,032	.....	5,770	555	19,152	.....
Eighth to fourteenth.....	.....	733	258	3,476	831	7,844	.....
Fifteenth to twenty-second...	.....	468	.....	4,337	1,332	12,758	.....
Twenty-third to close.....	.....	.....	.....	2,237	.....	27,684	.....
Total, November	95	3,233	258	15,820	2,721	67,438	.....
Agents, Brewster.....	.....	.....	.....	8	.....	.....	.....
Russell .....	.....	.....	.....	50	.....	13,074	.....
Total for year.....	1,783	43,881	2,596	150,887	16,341	484,244	2,073

Annual account of property cleared — (Continued).

DAYS.	MINERAL COAL.		Petroleum.	Iron ore.	Sundries.	Miles.	Total.
	Anthracite.	Bituminous.					
Eighth to fourteenth	29,564	1,318	.....	3,575	300	175,594	124,006
Fifteenth to twenty-second	24,146	1,582	42	5,600	756	188,743	155,069
Twenty-third to close	46,395	1,943	5	12,712	952	214,334	226,817
Total, May	100,099	4,843	47	21,887	2,008	567,671	508,892
First to seventh	25,800	1,120	1	9,100	1,938	163,555	153,133
Eighth to fourteenth	33,205	1,253	8	11,417	1,573	183,003	158,545
Fifteenth to twenty-second	40,908	1,557	9	11,267	1,568	197,261	169,192
Twenty-third to close	47,492	2,143	8	10,405	2,106	143,450	182,817
Total, June	147,405	6,073	26	42,189	7,185	687,269	663,685
First to seventh	52,051	115	1	9,199	2,852	179,563	182,333
Eighth to fourteenth	32,018	4,759	39	10,952	1,350	120,461	123,444
Fifteenth to twenty-second	31,376	1,688	7	9,096	552	136,600	141,462
Twenty-third to close	78,921	2,644	25	13,127	1,549	146,972	215,139
Total, July	194,366	9,210	72	42,365	6,303	583,596	662,378

First to seventh.....	59,512	1,226	11	8,884	871	140,409	175,620
Eighth to fourteenth.....	24,589	1,643	25	10,270	1,067	149,955	149,018
Fifteenth to twenty-second.....	30,518	1,553	59	12,824	965	187,541	178,973
Twenty-third to close.....	64,548	1,723	34	15,260	2,331	267,848	255,309
Total, August.....	179,167	6,145	129	47,238	5,234	745,753	758,920

First to seventh.....	51,557	855	25	8,603	736	189,745	191,603
Eighth to fourteenth.....	26,539	3,591	4	8,688	882	197,341	188,899
Fifteenth to twenty-second.....	26,431	2,194	31	10,298	1,264	189,739	179,304
Twenty-third to close.....	48,556	1,812	12	9,564	1,992	203,810	220,531
Total, September.....	153,083	8,452	72	37,153	4,874	780,635	780,337

First to seventh.....	47,774	1,462	30	10,236	818	184,404	190,938
Eighth to fourteenth.....	23,946	9,892	7	8,400	420	177,300	174,334
Fifteenth to twenty-second.....	27,590	729	43	11,060	1,629	212,848	191,829
Twenty-third to close.....	49,453	987	41	9,492	1,750	204,451	212,508
Total, October.....	148,763	13,070	121	39,188	4,617	779,003	769,609

First to seventh.....	36,189	2,340	47	6,838	508	174,900	181,145
Eighth to fourteenth.....	13,355	545	4	7,549	782	137,138	135,145

Annual account of property in tons cleared — (Continued).

DAYS.	MINERAL COAL.		Petroleum.	Iron ore.	Sundries.	Miles.	Total.
	Anthracite.	Bituminous.					
Fifteenth to twenty-second.....	32,508	444	42	9,878	1,146	152,145	183,486
Twenty-third to close.....	114,136	318	23	4,984	444	39,850	197,315
Total, November	196,384	3,647	116	29,249	2,880	504,033	697,091
Agents, Brewster	47,659	1,314	.....	.....	.....	.....	53,566
Russell .....	.....	.....	.....	.....	.....	.....	51,470
Total for year.....	1,166,926	52,754	583	259,269	33,101	.....	4,942,948

ANNUAL STATEMENT of way freight going east.

OFFICES.	Boats. Number of miles cleared.	THE FOREST — PRODUCT OF WOOD.					AGRICULTURE — PRODUCT OF ANIMALS.						
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Pork.	Beef.	Cheese	Butter	Lard, tallow and lard oil.	Wool.	Hides.
West Troy	29, 173	22, 447	. . . . .	774	. . . . .	4, 012	. . . 8	. . . 38	. . . 5	. . . 1	. . . 17	. . . 7	. . . . 30
Syracuse	336, 030	5, 818	19	498	1, 245	14, 207	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Rochester	40, 895	273	. . . .	104	183	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Tonawanda	50, 728	73, 256	3, 246	10, 082	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Buffalo	199, 321	31, 895	803	700	7, 821	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Waterford	62, 314	153, 233	. . . . .	. . . . .	. . . . .	1, 824	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Whitehall	1, 198	2, 227	33	9, 940	301	10, 954	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Oswego	14, 244	20, 747	684	. . . . .	771	3, 503	. . . . .	. . . . .	. . . . .	. . . . .	2	. . . . .	. . . . .
Geneva	37, 114	4, 095	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Boonville	28, 572	30, 468	1	540	. . . . .	14, 395	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Total	799, 589	344, 459	4, 786	22, 638	10, 321	48, 895	8	38	5	1	19	7	30

Statement of way freight going east — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.										
	Flour.	Wheat.	Rye.	Corn.	Corn meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Apples.	Potatoes.
West Troy.....	30	210	.....	.....	.....	.....	2,912	2	.....	21	890
Syracuse.....	2,093	1,804	.....	2,636	279	2,515	7,317	189	2,704	2,545	3,958
Rochester.....	3	4,521	.....	.....	.....	5,932	1,410	32	251	2,333	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	529	52,694	5,317	70,439	.....	1,382	.....	9,304	749	.....	.....
Waterford.....	41	.....	196	.....	.....	.....	.....	13	1	1,100	9,579
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego.....	384	2,206	.....	168	4	2,283	.....	.....	37	54	.....
Geneva.....	.....	5,586	1,075	.....	.....	1,752	796	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	3,080	67,021	6,588	73,243	283	13,864	12,435	9,540	3,742	6,053	14,427

Statement of way freight going east — (Continued).

OFFICES.	Flax seed.*	MANUFACTURES.							MERCHANDISE.			
		Domestic spirits.	Oil meal and cake.	Leather	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic salt.	Sugar.	Nails, spikes and horseshoes	Iron and steel.
West Troy.....	54	....	419	....	....	....	3	....	....	....	....	....
Syracuse.....	....	....	....	....	18	231	....	6	63,311	82	6	31
Rochester.....	....	....	....	....	....	....	....	....	8,345	....	....	67
Tonawanda.....	....	....	....	....	....	....	....	....	....	....	....	....
Buffalo.....	....	....	....	....	....	324	....	....	....	....	....	3
Waterford.....	....	....	....	....	15	....	....	....	....	....	....	....
Whitehall.....	....	....	....	....	....	....	....	....	....	....	....	....
Oswego.....	3	....	....	....	7	....	....	20	....	....	....	4
Geneva.....	....	....	....	....	....	....	....	....	....	....	....	....
Boonville.....	....	....	....	571	....	....	....	....	....	....	....	....
Total.....	54	3	419	571	40	555	3	26	71,656	82	6	105

* All other agricultural products.

Statement of way freight going east — (Concluded).

OFFICES.	MERCHANDISE.		OTHER ARTICLES.							Total tons.
	Flint, enamel, crockery and glassware.	All other merchandise.	Stone, lime and clay.	Rock and super-phosphat's	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore	Sundries.	
West Troy.....	.....	4,747	32,599	1,243	19,141	.....	.....	149	11,283	100,936
Syracuse.....	663	14,168	33,269	.....	218,960	11,895	214	...	6,161	396,948
Rochester.....	11	3,920	23,483	.....	67	296	.....	...	38	51,269
Tonawanda.....	5	.....	.....	.....	.....	.....	.....	...	390	86,979
Buffalo.....	.....	.....	370	.....	.....	7,452	6	...	2,972	192,760
Waterford.....	.....	2,343	47,388	.....	.....	.....	.....	...	.....	215,733
Whitehall.....	.....	.....	4,230	.....	.....	.....	.....	...	121	27,806
Oswego.....	18	68	7,182	.....	4,000	.....	.....	...	8	42,153
Geneva.....	.....	.....	13,015	.....	86,959	5,406	.....	...	488	119,172
Boonville.....	...	.....	605	.....	.....	.....	.....	...	304	46,884
Total	697	25,246	162,141	1,243	329,127	25,049	220	149	21,765	1,280,640

ANNUAL STATEMENT of way freight going west.

OFFICES.	Boats—Num- ber of miles cleared.	THE FOREST—PRODUCT OF WOOD.						AGRICULTURE— PRODUCT OF ANIMALS.	
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Pork.	Hides.
Albany	82,059	7,064	.....	.....	....	1,890	.....	.....	.....
West Troy	92,527	6,426	4	2,971	....	18,914	.....	.....	.....
Syracuse	227,740	1,364	36	120	506	9,175	.....	16	4
Rochester	30,198	270	.....	.....	168	3,269	541	.....	.....
Tonawanda	30,791	200	.....	843	....	518	.....	.....	.....
Buffalo .....	.....	.....	.....	.....	....	.....	.....	.....	.....
Waterford	2,324	75	.....	.....	....	3,097	.....	.....	.....
Whitehall .....	.....	.....	.....	.....	....	.....	.....	.....	.....
Oswego	220	.....	.....	.....	....	.....	.....	.....	.....
Geneva	42,793	4,705	.....	.....	....	.....	.....	.....	.....
Boonville	30,286	168	1	.....	....	.....	.....	51	241
Total	538,938	20,272	41	3,934	674	36,863	541	67	245

Annual statement of way freight going west — (Continued).

OFFICES.	Flour.	Wheat.	Corn.	Corn meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	154	65	1,226	1	276	....	1,065	339	82	....	....	1
West Troy.....	....	248	266	...	150	160	359	574	....	....	....	....
Syracuse.....	15	3,062	261	....	216	324	2	84	....	3	2	....
Rochester.....	....	1,205	244	....	....	....	82	....	....	546	....	....
Tonawanda.....	....	240	....	....	....	....	....	....	....	488	....	....
Buffalo.....	....	....	....	....	....	....	....	....	....	....	....	....
Waterford.....	....	....	....	....	....	....	32	5	....	....	....	....
Whitehall.....	....	....	....	....	....	....	....	....	....	....	....	....
Oswego.....	....	....	....	....	713	....	....	....	....	....	....	....
Geneva.....	....	878	....	....	319	493	....	....	....	....	....	....
Boonville.....	25	....	669	....	....	....	154	77	....	153	....	....
Total	194	5,698	2,666	1	1,674	977	1,694	1,079	82	1,190	2	1

Annual statement of way freight going west — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.								
	Clover and grass seed.	Flax seed.	Oil meal and cake.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic cottons.	Domestic salt.	Foreign salt.
Albany.....	7	.....	2,342	.....	35	.....	.....	394
West Troy...	1	350	238	6	1	5,762	1,106	667	25	.....	76
Syracuse.	35	.....	.....	.....	39	.....	23,964	.....
Rochester.	125	.....
Tonawanda
Buffalo
Waterford....	19	.....	.....	.....	.....
Whitehall
Oswego
Geneva
Boonville....	72	.....
Total....	1	350	238	48	1	8,104	1,125	741	25	24,161	470

Annual statement of way freight going west — (Continued).

OFFICES.	MERCHANDISE.						
	Sugar.	Molasses.	Nails, spikes and horse- shoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchandise.
Albany	452	2	69	1,574	241	34	8,593
West Troy	147	9	45	881	58	1	8,634
Syracuse .....	.....	.....	.....	77	.....	169	9,965
Rochester .....	.....	.....	.....	.....	.....	141	3,296
Tonawanda .....	.....	.....	.....	.....	.....	.....	.....
Buffalo .....	.....	.....	.....	.....	.....	.....	.....
Waterford	8	.....	.....	.....	.....	.....	2,335
Whitehall .....	.....	.....	.....	.....	.....	.....	.....
Oswego .....	.....	.....	.....	.....	.....	.....	.....
Geneva .....	.....	.....	.....	.....	.....	.....	.....
Boonville	86	.....	18	.....	.....	.....	501
Total	693	11	132	2,532	299	345	33,324

TOTAL TONS of each article of way freight and total tons of all articles of way freight going east and west for season of 1888.

OFFICES.	Boats— Number of miles cleared.	THE FOREST — PRODUCT OF WOOD.						AGRICULTURE.		
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	PRODUCT OF ANIMALS.		
								Pork.	Beef.	Cheese.
Albany	82,059	7,064	.....	.....	.....	1,890	....	....	....	....
West Troy	121,700	28,873	4	3,745	.....	22,926	....	....	....	....
Syracuse	563,770	7,182	55	618	1,751	23,382	....	24	38	5
Rochester	71,093	543	.....	104	351	3,269	541	....	....	....
Tonawanda	81,519	73,456	3,246	10,925	.....	518	....	....	....	....
Buffalo	199,321	31,895	803	700	7,821	.....	....	....	....	....
Waterford	64,638	153,308	.....	.....	.....	4,921	....	....	....	....
Whitehall	1,198	2,227	33	9,940	301	10,954	....	....	....	....
Oswego	14,464	20,747	684	.....	771	3,503	....	....	....	....
Geneva	79,907	8,800	.....	.....	.....	.....	....	....	....	....
Boonville	58,858	30,636	2	540	.....	14,395	....	51	....	....
Total	1,338,527	364,731	4,827	26,572	10,995	85,758	541	75	38	5

Total tons of each article of way freight going east and west for season of 1888 — (Continued).

OFFICES.	AGRICULTURE.									
	PRODUCT OF ANIMALS.					VEGETABLE FOOD.				
	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.	Barley.
Albany	154	65	.....	1,226	1	276
West Troy	30	458	.....	266	.....	150
Syracuse	1	17	7	34	2,108	4,866	.....	2,897	279	2,731
Rochester	3	5,726	.....	244	.....	5,932
Tonawanda	240	.....	.....	.....	.....
Buffalo	529	52,694	5,317	70,439	.....	1,382
Waterford	41	.....	196	.....	.....	.....
Whitehall
Oswego	2	....	....	384	2,206	.....	168	4	2,996
Geneva	6,464	1,075	.....	.....	2,071
Boonville	241	25	.....	.....	669	.....	.....
Total	1	19	7	275	3,274	72,719	6,588	75,909	284	15,538

Total tons of each article of way freight going east and west for season of 1888 — (Continued).

OFFICES.	AGRICULTURE.							MANUFACTURES.				
	VEGETABLE FOOD.											
	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes	Dried fruit.	ALL OTHER AGRICULTURAL PRODUCTS	Clover and grass seed.	Flax seed.	Domestic spirits.	Oil meal and cake.
Albany.....	.....	1,065	339	82	...	.....	1	.....	.....	.....	.....	.....
West Troy.....	3,072	361	574	.....	21	890	...	1	404	.....	.....	657
Syracuse.....	7,641	191	2,788	.....	2,548	3,960	.....	.....	.....	.....	.....	.....
Rochester.....	1,410	114	251	.....	2,879	.....	.....	.....	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	488	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	9,304	749	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterford.....	.....	45	6	.....	1,100	9,579	.....	.....	.....	.....	.....	.....
Whitehall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego.....	.....	.....	37	.....	54	.....	.....	.....	.....	3	.....	.....
Geneva.....	1,289	154	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	77	.....	153	.....	.....	.....	.....	.....	.....	.....
Total.....	13,412	11,234	4,821	82	7,243	14,429	1	1	404	3	.....	657

Total tons of each article of way freight going east and west for season of 1888 — (Continued).

MANUFACTURES.									
OFFICES.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic cottons.	Domestic salt.	Foreign salt.
Albany.....	7	.....	2,342	.....	35	.....	.....	394
West Troy	6	1	5,762	1,109	667	25	.....	76
Syracuse	53	.....	231	.....	45	.....	87,275	.....
Rochester.....	8,470	.....
Tonawanda.....
Buffalo	324	.....	.....	.....	.....	.....
Waterford	15	.....	.....	19	.....	.....	.....	.....
Whitehall
Oswego	7	.....	.....	.....	.....	.....	.....	.....
Geneva	20	.....	.....	.....
Boonville	571	.....	.....	.....	.....	.....	.....	72	.....
Total	571	88	1	8,659	1,128	767	25	95,817	470

Total tons of each article of way freight going east and west for season of 1888 — (Continued).

OFFICES.	MERCHANDISE.						OTHER ARTICLES.		
	Sugar.	Molasses.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchan- dise.	Stone, lime and clay.	Gypsum.
Albany	452	2	69	1,574	241	34	8,593	20,088	.....
West Troy	147	9	45	881	58	1	13,381	61,749	.....
Syracuse	82	.....	6	108	.....	832	24,133	64,734	953
Rochester .....	.....	.....	.....	67	.....	152	7,216	41,982	.....
Tonawanda .....	.....	.....	.....	.....	.....	5	.....	77,530	.....
Buffalo .....	.....	.....	.....	3	.....	.....	.....	370	.....
Waterford	8	.....	.....	.....	.....	.....	4,678	47,404	.....
Whitehall .....	.....	.....	.....	.....	.....	.....	.....	4,230	.....
Oswego .....	.....	.....	.....	4	.....	18	68	7,182	.....
Geneva .....	.....	.....	.....	.....	.....	.....	.....	25,954	.....
Boonville	86	.....	18	.....	.....	.....	501	1,115	.....
Total	775	11	138	2,637	299	1,042	58,570	352,338	953

Total tons of each article of way freight going east and west for season of 1888 — (Concluded).

OFFICES.	OTHER ARTICLES.						Total tons.
	Rock and super-phosphates.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany	3,765	29,164	78	217	.....	207	79,425
West Troy	6,362	125,527	851	1	2,298	11,283	292,671
Syracuse .....	.....	433,276	19,116	417	.....	8,403	702,787
Rochester .....	.....	42,601	296	.....	.....	139	122,290
Tonawanda .....	.....	.....	192	.....	.....	3,915	170,515
Buffalo .....	.....	.....	7,452	6	.....	2,972	192,760
Waterford .....	.....	2,133	.....	.....	.....	.....	223,453
Whitehall .....	.....	.....	.....	.....	.....	121	27,806
Oswego .....	.....	4,000	.....	.....	.....	8	42,866
Geneva .....	.....	149,690	5,406	.....	.....	488	201,237
Boonville .....	.....	1,828	71	.....	.....	680	51,885
Total	10,127	788,219	33,462	641	2,298	28,216	2,107,695

ANNUAL STATEMENT of through freight (in tons) going east and total tons of each article going east during season of 1888.

OFFICES.	Boats— Number of miles cleared.	THE FOREST — PRODUCT OF WOOD.						AGRICULTURE— VEGETABLE FOOD.			
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Ashes, leached.	Pork.*	Flour.	Wheat.
Tonawanda.....	557, 680	460, 126	785	6, 807	....	....	....	....	...	5	417, 031
Buffalo.....	1, 445, 037	27, 787	375	....	....	....	420	....	...	...	....
Whitehall.....	171, 671	190, 934	....	620	130	2, 982	....	420	5	...	....
Oswego.....	84, 783	76, 969	154	....	....	185	....	2, 321	...	...	....
Boonville.....	100, 672	51, 750	....	11, 640	....	985	....	....	...	...	....
Total.....	2, 359, 843	807, 566	1, 314	19, 067	130	4, 152	420	2, 741	5	5	417, 031

* Product of animals.

Annual statement of through freight going east, etc. — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.								ALL OTHER AGRICULTURAL PRODUCTS.	MANUFACTURES.
	Rye.	Corn.	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.	Flax seed.	Oil meal and cake.
Tonawanda	5,680	423,671	207	1,173	59,618	968	...	...	7,328	654
Buffalo .....	.....	.....	708	.....	.....	.....	331	4,494	.....	.....
Whitehall .....	.....	.....	3,954	1,398	.....	703	.....	.....	.....	.....
Oswego .....	.....	.....	.....	.....	.....	.....	.....	1,947	.....	.....
Boonville.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	5,680	423,671	4,869	2,571	59,618	1,671	331	6,441	7,328	654

Annual statement of through freight going east, etc. — (Concluded).

OFFICES.	MANUFACTURES.			MERCHANDISE.			OTHER ARTICLES.			
	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Sugar.	Nails, spikes and horseshoes.	All other merchandise.	Stone, lime and clay.	Iron ore.	Sundries.	Total tons.
Tonawanda.....	.....	.....	.....	....	.....	.....	.....	.....	.....	467,718
Buffalo.....	8,761	.....	229	....	.....	2	1,452	.....	460	955,821
Whitehall.....	6,861	2,240	.....	35	54	221	1,134	256,973	2,465	470,607
Oswego.....	.....	.....	.....	....	.....	.....	70	.....	.....	85,754
Boonville.....	.....	.....	.....	....	.....	.....	.....	.....	6	66,328
Total	15,622	2,240	229	35	54	223	2,656	256,973	2,931	2,046,228

TOTAL TONS of through freight going west, during the season of 1888.

OFFICES.	Boats—num- ber of miles cleared.	THE FOREST — PRODUCT OF WOOD.				Lard, tallow and lard oil.*	AGRICULTURE — VEGETABLE FOOD.		
		Boards and scantling.	Shingles.	Timber.	Wood.	Ashes, pot and pearl.	Flour.	Wheat.	Corn.
Albany	279,383	1,023	.....	.....	....	.....	.....	756	.....
West Troy	1,761,277	1,640	125	241	196	350	11	696	7
Waterford	55,874	462	.....	2,947	....	.....	.....	...	114
Total	2,096,534	3,125	125	3,188	196	350	11	1,452	121

* Agriculture — Product of animals.

Total tons of through freight going west — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.					ALL OTHER AGRICULTURAL PRODUCTS.				MANUFACTURES.	
	Barley.	Oats.	Peas and beans.	Potatoes.	Dried fruit.	Unmanufactured tobacco.	Hemp.	Clover and grass seed.	Flax seed.	Domestic spirits.	Oil meal and cake.
Albany		128	27		78					7	
West Troy	550	21	140	5	721	3	932		436	179	43
Waterford		128									
Total	550	277	167	5	799	3	932	325	436	186	43

Total tons of through freight going west — (Continued).

OFFICES.	MANUFACTURES.					MERCHANDISE.					
	Furni- ture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse- shoes.	Iron and steel.
Albany .....	....	2,609	84	121	.....	971	113	333	...	.....	9,993
West Troy	15	9,033	2,128	2,035	2,491	4,731	2,604	1,792	28	193	31,183
Waterford .....	....	885	448	583	.....	1,411	464	753	...	408	.....
Total	15	12,527	2,660	2,739	2,491	7,113	3,181	2,878	28	601	41,176

Total tons of through freight going west — (Concluded).

OFFICES.	MERCHANDISE.			OTHER ARTICLES.						Total tons.
	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchandise.	Stone, lime and clay.	Rock and super-phosphates.	Anthracite coal.	Bituminous coal.	Petroleum.	Sundries.	
Albany.....	258	1	19,061	25,136	1,030	37,300	.....	.....	2	99,031
West Troy.....	2,092	14	67,114	80,688	5,885	235,244	11,827	47	.....	465,766
Waterford.....	56	.....	5,942	11,834	.....	84,294	5,784	.....	.....	116,513
Total	2,406	15	92,117	117,658	6,915	356,838	17,611	47	2	681,310

TOTAL TONS of through freight going east and west during the season of 1888.

OFFICES.	Boats—Num- ber of miles cleared.	THE FOREST—PRODUCT OF WOOD.						
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Ashes, leached.
Albany	279,383	1,023	.....	.....	.....	.....	.....	.....
West Troy	1,761,277	1,640	125	241	.....	196	350	.....
Tonawanda	557,680	460,126	785	6,807	.....	.....	.....	.....
Buffalo	1,445,037	27,787	375	.....	.....	.....	420	.....
Waterford	55,874	462	.....	2,947	.....	.....	.....	.....
Whitehall	171,671	190,934	.....	620	130	2,982	.....	420
Oswego	84,783	76,969	154	.....	.....	185	.....	2,321
Boonville	100,672	51,750	.....	11,640	.....	985	.....	.....
Total	4,456,377	810,691	1,439	22,255	130	4,348	770	2,741

Total tons of through freight going east and west — (Continued).

OFFICES.	AGRICULTURE.									
	PRODUCT OF ANIMALS.		VEGETABLE FOOD.							
	Pork.	Lard, tallow and lard oil.	Flour.	Wheat.	Rye.	Corn.	Barley.	Barley malt.	Oats.	Peas and beans.
Albany.....	...	...	...	756	.....	.....	.....	.....	128	27
West Troy.....	...	1	11	696	.....	7	550	.....	21	140
Tonawanda.....	...	...	...	...	.....	...	...	.....	.....	...
Buffalo.....	...	...	5	417,031	5,680	423,671	207	1,173	59,618	968
Waterford.....	...	...	...	...	.....	114	...	...	128	...
Whitehall.....	5	...	...	...	.....	...	708	...	...	...
Oswego.....	...	...	...	...	.....	...	3,954	1,398	...	703
Boonville.....	...	...	...	...	.....	...	...	...	...	...
Total	5	1	16	418,483	5,680	423,792	5,419	2,571	59,895	1,838

Total tons of through freight going east and west — (Continued).

OFFICES.	AGRICULTURE.						MANUFACTURES.			
	VEGETABLE FOOD.			ALL OTHER PRODUCTS.			Domestic spirits.	Oil meal and cake.	Furniture.	Pig iron.
	Apples.	Potatoes.	Dried fruit.	Unmanu- factured tobacco.	Hemp.	Clover and grass seed.				
Albany .....	.....	.....	78	.....	932	.....	7	.....	.....	2,609
West Troy .....	.....	5	721	3	.....	325	179	43	15	9,033
Tonawanda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo .....	.....	.....	.....	.....	.....	.....	.....	654	.....	8,761
Waterford .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	885
Whitehall	331	4,494	.....	.....	.....	.....	.....	.....	.....	6,861
Oswego .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boonville .....	.....	1,947	.....	.....	.....	.....	.....	.....	.....	.....
Total	331	6,446	799	3	932	325	186	697	15	28,149

Total tons of through freight going east and west — (Continued).

OFFICES.	MANUFACTURES.				MERCHANDISE.						
	Bloom and bar iron.	Castings and iron ware.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse- shoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glass ware.
Albany	84	121	.....	971	113	333	...	.....	9,993	258	1
West Troy	2,128	2,035	2,491	4,731	2,604	1,792	28	193	31,183	2,092	14
Tonawanda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo .....	.....	229	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterford	448	583	.....	1,411.	464	753	...	408	.....	56	.....
Whitehall	2,240	.....	.....	.....	35	.....	.....	54	.....	.....	.....
Oswego.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boonville .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	4,900	2,968	2,491	7,113	3,216	2,878	28	655	41,176	2,406	15

TOTAL TONS of each article and total tons of all articles cleared at each office on the canal during the season of 1888.

OFFICES.	Boats— Number of miles cleared.	THE FOREST—PRODUCT OF WOOD.						
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Ashes, leached.
Albany	361,442	8,087	.....	.....	.....	1,890	.....	.....
West Troy	1,882,977	30,513	129	3,986	.....	23,122	350	.....
Syracuse	563,770	7,182	55	618	1,751	23,382	.....	.....
Rochester	71,093	543	.....	104	351	3,269	541	.....
Tonawanda	639,199	533,582	4,031	17,732	.....	518	.....	.....
Buffalo	1,644,358	59,682	1,178	700	7,821	.....	420	.....
Waterford	120,512	153,770	.....	2,947	.....	4,921	.....	.....
Whitehall	172,869	193,161	33	10,560	431	13,936	.....	420
Oswego	99,027	97,716	838	.....	771	3,688	.....	2,321
Geneva	79,907	8,800	.....	.....	.....	.....	.....	.....
Boonville	159,530	82,386	2	12,180	.....	15,380	.....	.....
Agents, Brewster	.....	.....	.....	.....	135	.....	.....	.....
Russell	.....	4,931	.....	916	2,449	30,050	.....	.....
Total	5,294,684	1,180,353	6,266	49,743	13,709	120,456	1,311	2,741

Total tons of each article and total tons of all articles cleared at each office on the canal — (Continued).

OFFICES.	AGRICULTURE — PRODUCT OF ANIMALS.							AGRICULTURE — VEGETABLE FOOD.		
	Pork.	Beef.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.
Albany .....	....	....	....	....	....	....	....	154	820	....
West Troy .....	....	....	....	....	1	....	....	41	1,154	....
Syracuse	24	38	5	1	17	7	34	2,108	4,866	....
Rochester ..	....	....	....	....	....	....	....	3	5,726	....
Tonawanda ..	....	....	....	....	....	....	....	....	240	....
Buffalo .....	....	....	....	....	....	....	....	534	469,725	10,997
Waterford ..	....	....	....	....	....	....	....	41	....	196
Whitehall ..	5	....	....	....	....	....	....	....	....	....
Oswego .....	....	....	....	....	2	....	....	384	2,206	....
Geneva .....	....	....	....	....	....	....	....	....	6,464	1,075
Boonville ..	51	....	....	....	....	....	241	25	....	....
Agents, Brewster ..	....	....	....	....	....	....	....	....	....	....
Russell .....	....	....	....	....	....	....	....	....	....	....
Total	80	38	5	1	20	7	275	3,290	491,201	12,268

Total tons of each article and total tons of all articles cleared at each office on the canal — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.									
	Corn.	Corn meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	1,226	1	276	.....	1,193	339	109	.....	.....	79
West Troy.....	273	....	700	3,072	382	574	140	21	895	721
Syracuse.....	2,897	279	2,731	7,641	191	2,788	.....	2,548	3,960	....
Rochester.....	244	....	5,932	1,410	114	251	.....	2,879	.....	....
Tonawanda.....	.....	....	.....	.....	.....	.....	.....	488	.....	....
Buffalo.....	494,110	....	1,589	1,173	68,922	749	968	.....	.....	....
Waterford.....	114	....	.....	.....	173	6	.....	1,100	9,579	....
Whitehall.....	.....	....	708	.....	.....	.....	.....	331	4,494	....
Oswego.....	168	4	6,950	1,398	.....	37	703	54	.....	....
Geneva.....	.....	....	2,071	1,289	.....	.....	.....	.....	.....	....
Boonville.....	669	....	.....	.....	154	77	.....	153	1,947	....
Agents, Brewster.....	.....	....	.....	.....	.....	.....	.....	.....	.....	....
Russell.....	.....	....	.....	.....	.....	.....	.....	.....	.....	....
Total	499,701	284	20,957	15,983	71,129	4,821	1,920	7,574	20,875	800

Total tons of each article and total tons of all articles cleared at each office on the canal — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.				MANUFACTURES.							
	Unmanu- factured tobacco.	Hemp.	Clover and grass seed.	Flax seed	Domestic spirits.	Oil meal and cake.	Leath'r.	Furni- ture.	Bar and pig lead	Pig iron.	Bloom and bar iron.	Castings and iron ware.
Albany	7	.....	.....	7	....	4,951	84	156
West Troy	3	932	326	840	179	700	.....	21	1	14,795	3,237	2,702
Syracuse	53	....	231	.....	45
Rochester
Tonawanda
Buffalo	7,328	.....	654	.....	.....	.....	9,085	.....	.....
Waterford	15	....	885	467	229
Whitehall	6,861	2,240	583
Oswego	3	.....	.....	7	....	.....	.....	.....
Geneva	20
Boonville	571	.....	.....	.....	.....	.....
Agents, Brewster. Russell
Total	3	932	326	8,168	189	1,354	571	103	1	36,808	6,028	3,735

Total tons of each article and total tons of all articles cleared at each office on the canal — (Continued).

OFFICES.	MERCHANDISE.										
	Domestic cottons.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchandise.
Albany	1,365	565	335	...	69	11,567	498	35	27,654
West Troy	25	2,491	4,807	2,751	1,801	28	238	32,064	2,150	15	80,495
Syracuse	87,275	82	.....	.....	...	6	108	.....	832	24,133
Rochester	8,470	.....	.....	.....	...	.....	67	.....	152	7,216
Tonawanda	5	.....
Buffalo	3	.....	.....	.....
Waterford	1,411	472	753	...	408	.....	56	.....	10,620
Whitehall	35	.....	...	54	.....	.....	18	221
Oswego	4	.....	.....	68
Geneva	488
Boonville	72	.....	86	.....	...	18	.....	.....	.....	501
Agents, Brewster. Russell..	4,450	.....	.....	.....	...	.....	.....	.....	.....	.....
Total	25	102,758	7,665	3,909	2,889	28	793	43,813	2,704	1,057	151,456

Total Tons of property left at tide-water from the Erie Canal during the season of 1888.

OFFICES.	THE FOREST—PRODUCT OF WOOD.					AGRICULTURE—VEGETABLE FOOD.				
	Boards and scantling.	Shingles.	Timber.	Wood.	Flour.	Wheat.	Rye.	Corn.	Barley.	Barley malt.
Albany	320,665	445	.....	1,400	....	.....	1,425	7,014	1,164	398
Albany to New York.	128,817	378	.....	280	16	111,077	.....	93,419	1,339	3,566
West Troy	13,248	415	1,615	4,463	....	.....	234	237	233	176
W. Troy to New York	74,831	106	5,048	322	16	302,143	456	316,318	3,431	5,505
Total	537,561	1,344	6,663	6,465	32	413,220	2,115	416,988	6,227	9,645

Total tons of property left at tide-water from the Erie canal — (Continued).

OFFICES.	AGRICULTURE—VEGETABLE FOOD.					ALL OTHER AGRICULTURAL PRODUCTS.	MANUFACTURES.				
	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.		Oil meal and cake.	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
Albany	1,287	....	....	....	....	....	....	....	....	....	213
Albany to New York..	19,806	....	712	1,016	1,573	1,206	....	....	2,251	....	....
West Troy	191	574	....	....	....	240	186	....	2,543	21	....
West Troy to New York.	37,230	....	256	4,803	2,590	6,352	1,434	1	5,164	....	....
Total	58,514	574	968	5,819	4,163	7,798	1,620	1	9,958	21	213

Total tons of property left at tide-water from the Erie canal — (Concluded).

OFFICES.	MANUFACTURES.		MERCHANDISE.		OTHER ARTICLES.						Total tons.
	Domestic salt.	Foreign salt.	Iron and steel.	All other merchandise.	Stone, lime and clay.	Rock and superphosphates.	Anthracite coal.	Petroleum.	Iron ore.	Sundries.	
Albany	1,309	....	6	465	112	....	....	....	....	2,096	337,999
Albany to New York.	15,569	....	....	6,563	2,289	....	411	1	....	929	391,278
West Troy	3,270	....	....	1,440	28,826	....	68,822	....	543	....	127,277
West Troy to New York	29,153	264	20	7,531	6,480	774	143	....	....	5,629	816,000
Total	49,301	264	26	15,999	37,707	774	69,376	1	543	8,654	1,672,554

*Property left at tide-water from the Champlain canal during the season
of 1888.*

	Tons.
Boards and scantling	354,964
Timber	1,510
Staves	130
Wood	22,314
Ashes, leached	389
Lard, tallow and lard oil	15
Flour	34
Rye	196
Barley	708
Apples	1,216
Potatoes	13,578
Furniture.....	3
Bar and pig lead	179
Pig iron	8,913
Bloom and bar iron.....	2,545
Castings and iron ware.....	10
Sugar	35
Nails, spikes and horseshoes	30
Iron and steel.....	646
All other merchandise.....	3,628
Stone, lime and clay	56,350
Phosphate	719
Anthracite coal.....	5,391
Iron ore	252,163
Sundries.....	8,734
Total.....	<u><u>734,400</u></u>

Total tons of property left at tide-water from all canals.

	Tons.
Boards and scantling	1,021,021
Shingles	1,442
Timber	18,643
Staves	130
Wood	30,243
Ashes, leached	2,800
Lard, tallow and lard oil	15
Flour	78
Wheat	413,447
Rye	2,740
Corn	416,988
Barley	31,316
Barley malt	12,185
Oats	58,514
Bran and ship stuff	574
Peas and beans	1,671
Apples	7,396
Potatoes	20,024
Flaxseed	7,798
Oil meal and cake	1,620
Furniture	4
Bar and pig lead	179
Pig iron	18,871
Bloom and bar iron	2,565
Castings and iron ware	223
Domestic salt	49,301
Foreign salt	264
Sugar	35
Nails, spikes and horse shoes	30
Iron and steel	672
All other merchandise	19,627
Stone, lime and clay	95,955
Phosphate	1,493
Anthracite coal	76,659
Petroleum	1
Iron ore	252,706
Sundries	17,431
Total	2,584,661

PROPERTY that went to New York without breaking bulk, from the Erie canal during the season of 1888.

OFFICES.	THE FOREST—PRODUCT OF WOOD.				AGRICULTURE—VEGETABLE FOOD.		
	Boards and scantling.	Shingles.	Timber.	Wood.	Flour.	Wheat.	Rye.
Albany.....	128,817	378	.....	280	16	111,077	.....
West Troy.....	74,831	106	5,048	322	16	302,143	456
Total.....	203,648	484	5,048	602	32	413,220	456

Property that went to New York without breaking bulk, from the Erie canal, during the season of 1888 — (Continued).

OFFICES.	AGRICULTURE—VEGETABLE FOOD.						
	Corn.	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.
Albany	93,419	1,399	3,566	19,806	712	1,016	1,573
West Troy	316,318	3,431	5,505	37,230	256	4,803	2,590
Total	409,737	4,830	9,071	57,036	968	5,819	4,163

Property that went to New York without breaking bulk, from the Erie canal, during the season of 1888 — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.	MANUFACTURES.				
		Oil meal and cake.	Furniture.	Pig iron.	Domestic salt.	Foreign salt.
	Flaxseed.					
Albany	1,206	.....	.....	2,251	15,569	.....
West Troy	6,352	1,434	1	5,164	29,153	264
Total	7,558	1,434	1	7,415	44,722	264

Property that went to New York without breaking bulk, from the Erie canal, during the season of 1888 — (Concluded).

OFFICES.	MERCHANDISE.		OTHER ARTICLES.					
	Iron and steel.	All other merchandise.	Stone, lime and clay.	Rock and super phosphates.	Anthracite coal.	Petroleum.	Sundries.	Total tons.
Albany .....	.....	6,563	2,289	.....	411	1	929	391,278
West Troy	20	7,531	6,480	774	143	.....	5,629	816,000
Total	20	14,094	8,769	774	554	1	6,558	1,207,278

PROPERTY that went to New York from the Champlain canal, without breaking bulk, for season of 1888.

OFFICES.	THE FOREST.				AGRICULTURE.				
	PRODUCT OF WOOD.				PRODUCT OF ANIMALS.	VEGETABLE FOOD.			
	Boards and scantling.	Staves.	Wood.	Ashes, leached.	Lard, tallow and lard oil.	Rye.	Barley.	Apples.	Potatoes.
Albany	17,157	.....	504	.....	.....	.....	.....	.....	.....
West Troy	200,395	130	2,526	389	15	174	708	353	4,146
Waterford	8,224	.....	238	.....	.....	.....	.....	762	9,432
Total	225,776	130	3,268	389	15	174	708	1,115	13,578

Property that went to New York from the Champlain canal without breaking bulk — (Concluded).

OFFICES.	MANUFACTURES.			MERCHANDISE.				OTHER ARTICLES.				Total tons.
	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Sugar.	Nails spikes & horse- shoes.	Iron and steel.	All other merchan- dise.	Stone, lime and clay.	Rock and super- phos- phates.	Iron ore.	Sun	
Albany .....	....	465	.....	....	....	....	127	764	....	1,034	368	20,419
West Troy....	179	4,114	1,632	35	30	646	2,195	39,675	719	234,723	7,487	500,271
Waterford.....	....	....	.....	....	.....	....	191	775	....	3,763	21	23,406
Total.....	179	4,579	1,632	35	30	646	2,513	41,214	719	239,520	7,876	544,096

Total tons of property that went to New York from the Oswego canal.

	Tons.
Boards and scantling.....	30,570
Shingles.....	76
Ashes, leached.....	2,411
Barley.....	17,325
Barley malt.....	1,026
Peas and beans.....	703
Flour.....	10
Total.....	<u>52,121</u>

Total tons of property that went to New York from the Black River canal.

	Tons.
Board and scantlings.....	9,191
Wood.....	258
Timber.....	10,470
Potatoes.....	2,283
Total.....	<u>22,202</u>

Property left at tide-water from the Black River canal.

	Tons.
Boards and scantlings.....	44,962
Wood.....	1,206
Sundries.....	43
Total.....	<u>46,211</u>

Property left at tide-water from the Cayuga and Seneca canal.

	Tons.
Rye.....	<u>208</u>

Total tons of property that went to New York from the Cayuga and Seneca canal.

	Tons.
Wheat.....	227
Rye.. ..	223
Barley.....	1,183
Barley malt.....	1,374
Apples.....	361
Stone, lime and clay.....	1,828
Anthracite coal.....	1,892
Total.....	<u>7,088</u>

VALUE of all the property left at tide-water during the season of 1888.

OFFICES.	THE FOREST—PRODUCT OF WOOD.						AGRICULTURE—VEGETABLE FOOD.			
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, leached.	Lard, tallow and lard oil.*	Flour.	Wheat.	Rye.
Albany	\$4,643,324	\$28,292	.....	.....	\$7,855	\$4,332	.....	\$900	\$4,072,835	\$37,919
West Troy	8,697,538	17,872	\$225,535	\$5,200	41,100	6,866	\$3,600	1,806	11,086,896	25,179
Waterford	108,561	.....	.....	.....	425	.....	.....	.....	.....	.....
Total	\$13,449,423	\$46,164	\$225,535	\$5,200	\$49,380	\$11,198	\$3,600	\$2,706	\$15,159,731	\$63,098

*Agriculture—Products of animals.

Value of all the property left at tide-water — (Continued).

OFFICES.	AGRICULTURE—VEGETABLE FOOD.							
	Corn.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.
Albany.....	\$2,259,739	\$352,107	\$259,564	\$461,406	.....	\$106,065	\$17,890	\$20,970
West Troy..	7,122,488	691,754	424,825	818,598	\$11,479	19,197	92,876	120,258
Waterford..	.....	.....	.....	.....	.....	.....	12,701	125,755
Total...	\$9,382,227	\$1,043,861	\$684,389	\$1,279,995	\$11,479	\$125,262	\$123,467	\$266,983
								*Flaxseed.
								\$72,357
								395,525
							
								\$467,882

* All other agricultural products.

Value of all the property left at tide-water — (Continued).

OFFICES.	MANUFACTURES.							MERCHANDISE.	
	Oil meal and cake.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic salt.	Foreign salt.	Sugar.
Albany.....	.....	.....	.....	\$54,309	.....	\$42,588	\$101,270	.....	.....
West Troy.....	\$97,228	\$1,360	\$13,261	319,859	\$128,268	2,900	194,540	\$4,227	\$5,600
Waterford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$97,228	\$1,360	\$13,261	\$374,168	\$128,268	\$44,588	\$295,810	\$4,227	\$5,600
									\$2,400

OFFICES.

Albany.....
 West Troy.....
 Waterford.....

Total

Value of all the property left at tide-water — (Concluded).

OFFICES.	MERCHANDISE.		OTHER ARTICLES.						Total value.
	Iron and steel.	All other merchandise.	Stone, lime and clay.	Rock and superphosphates.	Anthracite coal.	Petroleum.	Iron ore.	Sundries.	
Albany	\$666	\$2,867,425	\$34,194	.....	\$1,644	\$16	\$4,135	\$514,879	\$19,966,711
West Troy	79,872	4,736,249	886,308	\$29,867	304,994	....	991,637	1,574,304	35,180,557
Waterford .....	.....	76,600	7,750	.....	.....	....	15,053	2,460	349,305
Total	\$80,568	\$7,680,274	\$928,252	\$29,867	\$306,638	\$16	\$1,010,825	\$2,091,643	\$55,496,573

PROPERTY that went to New York from all canals, without breaking bulk, for season of 1888.

OFFICES.	THE FOREST—PRODUCT OF WOOD.						Lard, tallow and lard oil.*
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, leached.	
Albany	173,229	417	.....	.....	910	1,083	.....
West Troy	287,733	144	15,518	130	2,979	1,717	15
Waterford	8,224	.....	.....	.....	238	.....	.....
Total....	469,186	561	15,518	130	4,127	2,800	15

* Agriculture — product of animals.

Property that went to New York from all canals, without breaking bulk, for season of 1888 — (Continued).

		AGRICULTURE — VEGETABLE FOOD.									
OFFICES.		Flour.	Wheat.	Rye.	Corn.	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.
		16	111,077	.....	93,419	6,784	4,259	19,806	1,415	1,016	1,573
	Albany	26	302,370	853	316,318	17,262	7,212	37,230	256	5,517	9,019
	West Troy .....	.....	.....	.....	.....	.....	.....	.....	.....	762	9,432
	Waterford .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total.	42	413,447	853	409,737	24,046	11,471	57,036	1,671	7,295	20,024

Property that went to New York from all canals, without breaking bulk, for season of 1888 — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.	MANUFACTURES.						MERCHANDISE.	
		Oil meal and cake.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Domestic salt.	Foreign salt.	Sugar.
Albany.....	Flaxseed. 1,206	.....	.....	.....	2,716	.....	15,569	.....	Nails, spikes and horseshoes
West Troy.....	6,352	1,434	1	179	9,278	1,632	29,153	264	..... 30
Waterford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	7,558	1,434	1	179	11,994	1,632	44,722	264	35 30

Property that went to New York from all canals, without breaking bulk, for season of 1888 — (Concluded).

OFFICES.	MERCHANDISE.		OTHER ARTICLES.						Total tons.
	Iron and steel.	All other merchant- disc.	Stone, lime and clay.	Rock and superphos- phates.	Anthracite coal.	Petroleum.	Iron ore.	Sundries.	
Albany .....	.....	6,690	3,053	.....	411	1	1,034	1,297	446,981
West Troy	666	9,725	47,983	1,493	2,035	.....	234,723	13,116	1,362,398
Waterford .....	.....	191	775	.....	.....	.....	3,763	21	23,406
Total	666	16,506	51,811	1,493	2,446	1	239,520	14,434	1,832,785

TOTAL TONS OF EACH ARTICLE AND TOTAL TONS OF ALL ARTICLES CARRIED ON THE ERIE CANAL DURING THE SEASON OF 1888.

OFFICES.	Boats— Number of miles cleared.	THE FOREST—PRODUCT OF WOOD.						AGRICULTURE— PRODUCT OF ANIMALS.		
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Pork.	Beef.	Cheese.
Albany.....	351,362	5,098	.....	.....	.....	.....	.....	.....	.....	.....
West Troy	903,988	28,283	.....	1,821	.....	7,439	350	.....	.....	.....
Syracuse	563,770	7,182	55	618	1,751	23,382	.....	24	38	5
Rochester	71,093	543	.....	104	351	3,269	541	.....	.....	.....
Tonawanda	639,199	533,582	4,031	17,732	.....	518	.....	.....	.....	.....
Buffalo.....	1,644,358	59,682	1,178	700	7,821	.....	420	.....	.....	.....
Total	4,173,770	634,370	5,264	20,975	9,923	34,608	1,311	24	38	5

Total tons of each article and total tons of all articles carried on the Erie canal during the season of 1888 — (Continued).

OFFICES.	AGRICULTURE.									
	PRODUCT OF ANIMALS.					VEGETABLE FOOD.				
	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.	Barley. Barley malt.
Albany .....	....	....	....	....	....	756	....	....	....	....
West Troy .....	....	....	....	....	30	1,146	....	7	....	3,072
Syracuse	1	17	7	34	2,108	4,866	....	2,897	279	7,641
Rochester .....	....	....	....	....	3	5,726	....	244	....	1,410
Tonawanda .....	....	....	....	....	....	240	....	....	....	....
Buffalo .....	....	....	....	....	534	469,725	10,997	494,110	....	1,173
Total	1	17	7	34	2,675	482,459	10,997	497,258	279	13,296

Total tons of each article and total tons of all articles carried on the Erie canal during the season of 1888 — (Continued).

OFFICES.	MANUFACTURES.									
	Domestic spirits.	Oil meal and cake.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic cottons.	Domestic salt.	Foreign salt.
Albany	7	.....	.....	.....	4,319	84	156	.....	.....	1,365
West Troy	179	679	2	1	10,224	2,100	1,047	2	.....	3,632
Syracuse .....	.....	.....	53	.....	231	.....	45	.....	87,275	.....
Rochester .....	.....	.....	.....	.....	.....	.....	.....	.....	8,470	.....
Tonawanda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo .....	.....	654	.....	.....	9,085	.....	229	.....	.....	.....
Total	186	1,333	55	1	23,859	2,184	1,477	2	95,745	4,997

Total tons of each article and total tons of all articles carried on the Erie canal during the season of 1888 — (Continued).

OFFICES.	MERCHANDISE.							
	Sugar.	Molasses.	Coffee.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchandise.
Albany	564	335	.....	62	11,253	499	35	26,772
West Troy	930	1,041	28	.....	30,940	282	1	75,519
Syracuse	82	.....	.....	6	108	.....	832	24,133
Rochester .....	.....	.....	.....	.....	67	.....	152	7,216
Tonawanda .....	.....	.....	.....	.....	.....	.....	5	.....
Buffalo .....	.....	.....	.....	.....	3	.....	.....	.....
Total	1,576	1,376	28	68	42,371	781	1,025	133,642

TOTAL TONS OF EACH ARTICLE AND TOTAL TONS OF ALL ARTICLES CARRIED ON THE CHAMPLAIN CANAL DURING THE SEASON OF 1888.

OFFICES.	Boats— Number of miles cleared.	THE FOREST—PRODUCT OF WOOD.						AGRICULTURE—PRO- DUCT OF ANIMALS.	
		Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, leached.	Pork.	Lard, tallow and lard oil.
Albany	8,958	2,611	.....	.....	.....	1,890	.....	.....	.....
West Troy	113,857	2,230	129	2,165	.....	15,683	.....	.....	1
Waterford	120,512	153,770	.....	2,947	.....	4,921	.....	.....	.....
Whitehall	172,869	193,161	33	10,560	431	13,936	420	5	.....
Total	416,196	351,772	162	15,672	431	36,430	420	5	1

Total tons of each article and total tons of all articles carried on the Champlain canal during the season of 1888 — (Continued).

AGRICULTURE—VEGETABLE FOOD.											
OFFICES.	Flour.	Wheat.	Rye.	Corn.	Corn meal.	Barley.	Oats.	Bran and ship stuffs.	Apples.	Potatoes.	Dried fruit.
Albany.....	154	65	....	1,226	1	276	1,193	339	.....	.....	1
West Troy.....	11	2	....	266	....	....	380	....	.....	.....	....
Waterford.....	41	....	196	114	....	....	173	6	1,100	9,579	....
Whitehall.....	....	....	....	.....	....	708	....	....	331	4,494	....
Total.....	206	67	196	1,606	1	984	1,746	345	1,431	14,073	1

Total tons of each article and total tons of all articles carried on the Champlain canal during the season of 1888 — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.					
	Unmanufactured tobacco.	Clover and grass seed.	Oil meal and cake.	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic cottons.
Albany .....	.....	.....	.....	7	632	.....	.....	.....
West Troy	3	1	21	19	4,571	1,124	1,655	23
Waterford .....	.....	.....	.....	15	885	467	583	.....
Whitehall .....	.....	.....	.....	.....	6,861	2,240	.....	.....
Total	3	1	21	41	12,949	3,831	2,238	23

Total tons of each article and total tons of all articles carried on the Champlain canal during the season of 1888 — (Continued).

OFFICES.	MANUFACTURES.		MERCHANDISE.						
	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint enamel, crockery and glassware.	All other merchandise.
Albany.....	.....	.....	2	.....	7	314	.....	.....	252
West Troy.....	2,491	1,175	1,821	760	238	1,124	1,868	14	4,976
Waterford.....	.....	1,411	472	753	408	.....	56	.....	10,620
Whitehall.....	.....	.....	35	.....	54	.....	.....	.....	221
Total	2,491	2,586	2,330	1,513	707	1,438	1,924	14	16,069

Total tons of each article and total tons of all articles carried on the Champlain canal during the season of 1888— (Concluded).

OFFICES.	OTHER ARTICLES.							Total tons.
	Stone, lime and clay.	Rock and superphos- phates.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany.....	361	.....	4,560	.....	4	...	.....	13,895
West Troy.....	18,438	27	183,858	12,550	53	125	6,758	264,560
Waterford.....	59,238	.....	86,427	5,784	.....	.....	.....	339,966
Whitehall.....	5,364	.....	.....	.....	.....	256,973	2,586	498,413
Total	83,401	27	274,845	18,334	57	257,098	9,344	1,116,834

TOTAL TONS OF all property left at and between offices during the season of 1888.

OFFICES.	THE FOREST — PRODUCT OF WOOD.						AGRICULTURE — PRODUCT OF ANIMALS.			
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Ashes, leached.	Pork.	Beef.	Cheese.
Albany	654,797	884	.....	.....	4,399	.....	1,083	.....	.....	.....
West Troy	355,874	558	18,043	130	23,016	.....	1,717	.....	.....	.....
Syracuse	111,913	3,427	3,209	2,674	115,698	55	.....	24	38	4
Rochester	36,091	1,016	1,716	5,444	2,976	1,668	.....	.....	.....	.....
Tonawanda .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo	1,243	1	63	.....	75	.....	.....	.....	.....	.....
Waterford	8,224	.....	.....	.....	238	.....	.....	.....	.....	.....
Whitehall	746	125	2,624	.....	.....	28	.....	.....	.....	.....
Oswego	2,031	25	.....	2	.....	.....	.....	.....	.....	.....
Geneva	1,482	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	179	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	1,172,580	6,036	25,655	8,250	146,402	1,751	2,800	24	38	4

Total tons of all property left at and between offices during the season of 1888.— (Continued).

OFFICES.	AGRICULTURE—PRODUCT OF ANIMALS.					AGRICULTURE—VEGETABLE FOOD.				
	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.	Barley.
Albany.....	16	111,077	1,633	100,433	....	10,563
West Troy.....	15	....	....	34	302,370	1,085	316,555	....	20,753
Syracuse.....	1	19	8	34	2,604	22,465	4,583	73,481	277	6,513
Rochester.....	3	31,605	....	14	....	2,455
Tonawanda.....	395	....	....	....	....	....
Buffalo.....	1,451	....	467	....	35
Waterford.....
Whitehall.....	11	....	....	....	....	....
Oswego.....	2,706	574	2,504	....	....
Geneva.....	840	....	....	....	1,595
Boonville.....	92	....	....	357	....	....
Total	1	34	8	34	3,155	472,514	7,875	493,811	277	41,914

Total tons of all property left at and between offices during the season of 1888 — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.							ALL OTHER AGRICULTURAL PRODUCTS.	
	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.
Albany.....	4,797	21,093	.....	1,415	1,016	1,573	.....	.....	.....
West Troy.....	7,388	37,421	574	256	5,573	9,019	.....	.....	.....
Syracuse.....	84	6,926	2,385	.....	46	2	.....	2	6
Rochester.....	.....	50	251	.....	546	.....	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	.....	.....	.....	233	464	6	798	.....	.....
Waterford.....	.....	.....	.....	.....	762	9,432	.....	.....	.....
Whitehall.....	.....	28	.....	.....	.....	.....	.....	.....	3
Oswego.....	.....	80	.....	.....	.....	.....	.....	.....	5
Geneva.....	544	.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	183	596	.....	79	.....	.....	.....	.....
Total.....	12,813	65,781	3,806	1,904	8,486	20,032	798	2	14

Total tons of all property left at and between offices during the season of 1888 — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.		MANUFACTURES.							
	Clover and grass seed.	Flaxseed.	Oil meal and cake.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic salt.	Foreign salt.
Albany	1,206	.....	.....	.....	2,716	.....	213	16,878	.....
West Troy	6,592	1,620	4	179	15,993	2,565	10	32,423	264
Syracuse	42	.....	4,174	.....	104	40,942	65
Rochester	19	140	.....	.....	.....	22
Tonawanda
Buffalo	260	919	.....	.....	.....	25,513	831	335	6,710	4,756
Waterford
Whitehall	15	.....	4,476	.....	2,393	2,958	2,162
Oswego	9	.....	8	.....	2	658	.....
Geneva	201	.....
Boonville	235	.....
Total	260	8,717	1,620	70	198	53,020	3,396	3,057	101,005	7,269

Total tons of all property left at and between offices during the season of 1888 — (Continued).

OFFICES.	MERCHANDISE.							
	Sugar.	Molasses.	Coffee.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint, enamel crockery and glassware.	All other merchandise.
Albany	.....	.....	.....	.....	6	.....	.....	7, 169
West Troy	35	.....	.....	30	666	.....	.....	11, 841
Syracuse	677	.....	.....	6	756	873	923	19, 970
Rochester	5	1	.....	.....	119	58	154	8, 118
Tonawanda	.....	.....	.....	.....	.....	.....	250	557
Buffalo	1, 022	1, 406	28	.....	21, 971	3, 370	.....	.....
Waterford	.....	.....	.....	.....	.....	.....	.....	191
Whitehall	2, 177	1, 766	.....	711	823	1, 945	.....	7, 564
Oswego	5	.....	.....	.....	.....	.....	72	1, 772
Geneva	.....	.....	.....	.....	.....	.....	.....	.....
Boonville	.....	.....	.....	.....	.....	.....	.....	357
Total	3, 921	3, 173	28	747	24, 341	6, 246	1, 399	57, 539

Total tons of all property left at and between offices during the season of 1888 — (Concluded).

OFFICES.	OTHER ARTICLES.								Total tons.
	Stone, lime and clay.	Gypsum.	Rock and super- phosphates	Anthracite coal.	Bitumin- ous coal.	Petroleum.	Iron ore.	Sundries.	
Albany.....	3,420	.....	.....	411	.....	1	1,034	4,291	952,124
West Troy.....	88,631	.....	1,493	76,248	.....	.....	247,909	13,119	1,600,003
Syracuse.....	83,784	515	7,860	469,563	23,249	329	1,629	7,686	1,019,625
Rochester.....	53,880	.....	.....	41,698	296	.....	.....	3,806	192,151
Tonawanda.....	3,590	.....	.....	.....	.....	.....	.....	1,515	6,307
Buffalo.....	176,790	.....	13,258	149,475	.....	.....	113	50,006	461,599
Waterford.....	775	.....	.....	.....	.....	.....	3,763	21	23,406
Whitehall.....	22,232	.....	.....	242,188	9,572	54	.....	1,165	305,766
Oswego.....	5,633	466	.....	728	.....	161	.....	116	17,557
Geneva.....	4,583	.....	1,642	3,312	.....	130	.....	.....	14,329
Boonville.....	187	.....	.....	982	.....	.....	.....	.....	3,247
Total.....	443,505	981	24,253	984,605	33,117	675	254,448	81,725	4,596,114

Statement showing the total quantity in tons (of 2,000 lbs.) of all articles cleared at Buffalo during the season of 1888, and the value of the same.

	Tons.	Value.
Boards and scantling	59,682	\$644,571
Shingles	1,178	32,996
Timber	700	10,500
Staves and heading	7,821	20,882
Ashes, pot and pearl	420	1,470
Flour	534	27,198
Wheat	469,725	19,023,876
Rye	10,997	247,429
Corn	494,110	7,941,058
Barley	1,589	53,174
Barley malt	1,173	65,538
Oats	68,922	1,389,217
Bran and ship stuffs	749	13,107
Peas and beans	968	60,478
Flaxseed	7,328	219,841
Oil meal and cake	654	15,696
Pig iron	9,058	190,785
Castings and iron ware	229	22,911
Iron and steel	3	150
All other merchandise	2	400
Stone, lime and clay	1,822	13,665
Bituminous coal	7,452	18,630
Petroleum	6	105
Sundries	3,432	686,505
Total	1,148,581	\$30,700,182

Total quantity in tons of all property left at Buffalo from the canals during the season of 1888, and the value of the same.

	Tons.	Value.
Boards and scantling	1,243	\$13,435
Shingles	1	26
Timber	63	948
Wood	75	122
Butter	1	500
Wheat	1,451	58,787
Corn	467	7,515
Barley	35	1,157
Peas and beans	233	14,601
Apples	464	7,740
Potatoes	6	63
Dried fruit	798	95,814
Clover and grass seed	260	156,200
Flaxseed	919	27,582
Pig iron	25,513	535,773
Stone, lime and clay	176,790	1,325,925
Phosphate	13,258	331,450
Anthracite coal	149,474	747,375
Iron ore	113	294
Bloom and bar iron	831	41,540
Castings and iron ware	335	33,493
Domestic salt	6,710	23,485
Foreign salt	4,756	19,024
Sundries	50,006	10,001,077
Sugar	1,022	140,536
Molasses	1,406	84,363
Coffee	28	11,200
Iron and steel	21,971	1,098,532
Railroad iron	3,370	74,140
All other merchandise	27,187	5,437,412
Total	488,787	\$20,290,109

Tons of property cleared at Oswego during the season of 1888 and value of the same.

	Tons.	Value.
Boards and scantlings.....	97,716	\$1,172,790
Shingles.....	83	20,121
Staves and heading.....	771	7,705
Wood.....	3,688	7,902
Ashes, leached.....	2,321	7,738
Lard, tallow and lard oil.....	2	150
Flour.....	384	21,342
Wheat.....	2,206	73,532
Corn.....	168	3,000
Corn meal.....	4	100
Barley.....	6,950	999,361
Barley malt.....	1,398	79,892
Bran and ship stuff.....	37	740
Peas and beans.....	703	16,392
Apples.....	54	600
Domestic spirits.....	3	79
Furniture.....	7	1,400
Castings and iron ware.....	20	4,000
Iron and steel.....	4	240
Flint enamel, etc.....	18	1,080
All other merchandise.....	68	13,660
Stone, lime and clay.....	7,252	7,252
Anthracite coal.....	4,000	20,000
Sundries.....	2,687	527,400
Total.....	131,299	\$2,986,476

Total tons of property left at Oswego from the canals during the season of 1888.

	Tons.
Boards and scantling.....	577
Staves and heading.....	2
Wheat.....	239
Corn.....	727
Unmanufactured tobacco.....	5
Furniture.....	9
Castings and iron ware.....	2
Pig iron.....	8
Domestic salt.....	658

	Tons.
Flint, enamel, crockery, etc.....	72
All other merchandise.....	1,772
Stone, lime and clay	5,462
Gypsum	466
Anthracite coal.....	246
Petroleum	161
Sundries.....	116
Total.....	10,522

Total tons of property carried on Black River canal, season of 1888, and the value of the same.

	Tons.	Value.
Boards and scantling	82,386	\$741,480
Shingles	2	50
Timber	12,180	182,700
Wood	15,380	16,479
Pork	51	4,480
Hides	241	96,231
Flour.....	25	1,386
Corn	669	14,338
Oats.....	154	3,862
Bran and ship stuff	77	1,547
Apples.....	153	4,090
Potatoes ...	1,947	22,715
Leather.....	571	239,904
Domestic salt.....	72	577
Sugar	86	10,365
Nails, spikes, etc.....	18	1,472
All other merchandise.....	501	100,135
Stone, lime and clay.....	1,115	2,786
Anthracite coal.....	1,828	9,139
Bituminous coal	71	356
Sundries	686	6,855
Total	118,213	\$1,460,947

Total tons of property cleared on the Cayuga and Seneca canal during the season of 1888.

	Tons.
Boards and scantling.....	8,800
Wheat.....	6,464
Rye.....	1,075
Barley.....	2,071
Barley malt.....	1,289
Stone, lime and clay.....	25,954
Anthracite coal.....	149,690
Bituminous coal.....	5,406
All other merchandise.....	488
Total	201,237

Total tons of property cleared on the canal at Whitehall during the season of 1888, and the value of the same.

	Tons.	Value.
Boards and scantling.....	193,161	\$2,317,937
Shingles.....	33	792
Timber.....	10,560	52,799
Staves and heading.....	431	8,616
Wood.....	13,936	19,908
Ashes, leached.....	420	700
Pork.....	5	558
Barley.....	708	20,659
Apples.....	331	5,834
Potatoes.....	4,494	52,427
Pig iron.....	6,861	137,220
Bloom iron.....	2,240	67,211
Sugar.....	35	4,900
Nails, spikes and horseshoes.....	54	3,240
All other merchandise.....	221	88,240
Stone, lime and clay.....	5,364	53,639
Iron ore.....	256,973	770,920
Sundries.....	2,586	310,278
Total	498,413	\$3,915,878

Total tons of property left at Whitehall from the canal during the season of 1888, and the value of the same.

	Tons.	Value.
Boards and scantling.....	746	\$9,940
Shingles.....	125	3,000
Timber.....	2,624	9,184
Ashes, pot and pearl.....	28	2,750
Flour.....	11	600
Oats.....	28	700
Unmanufactured tobacco.....	3	600
Furniture.....	15	3,000
Pig iron.....	4,476	89,517
Castings.....	2,393	239,055
Domestic salt.....	2,958	44,365
Foreign salt.....	2,162	43,240
Sugar.....	2,177	304,805
Molasses.....	1,766	175,615
Nails, spikes and horseshoes.....	711	42,678
Iron and steel.....	823	41,169
Railroad iron.....	1,945	77,808
All other merchandise.....	7,564	302,576
Stone, lime and clay.....	22,232	222,317
Anthracite coal.....	242,188	968,753
Bituminous coal.....	9,572	38,288
Petroleum.....	54	1,225
Sundries.....	1,165	23,296
Total.....	305,766	\$2,644,481

TOTAL TONS OF PROPERTY LEFT FROM THE CANAL AT WHITEHALL GOING TO VERMONT AND CANADA.

ARTICLES.	Description.	Going to Canada.	Going to New York.	Going to Vermont.
THE FOREST.				
<i>Product of wood:</i>				
Boards and scantling.....	Feet.....	120,000	377,000	.....
Shingles.....	M.....	.....	1,000	.....
Timber.....	Cubic feet..	.....	63,800	67,400
Ashes, pot and pearl.....	Barrels.....	200	.....	.....
AGRICULTURE.				
<i>Vegetable food:</i>				
Flour.....	Barrels.....	.....	100	.....
Oats.....	Bushels.....	.....	1,750	.....
Tobacco.....	.....	6,000	.....	.....
MANUFACTURES.				
Furniture.....	Pounds.....	.....	30,000	.....
Pig iron.....	Pounds.....	.....	526,600	8,425,100
Castings and iron ware.....	Pounds.....	.....	2,195,200	2,585,900
Domestic salt.....	Pounds.....	.....	258,800	5,656,500
Foreign salt.....	Pounds.....	290,300	962,800	3,070,900
MERCHANDISE.				
Sugar.....	Pounds.....	2,691,200	54,150	1,609,000
Molasses.....	Pounds.....	3,092,700	144,000	295,600
Nails, spikes and horseshoes.....	Pounds.....	224,000	492,400	706,200

Total tons of property left from the canal at Whitehall going to Vermont and Canada — (Concluded).

ARTICLES.	Description.	Going to Canada.	Going to New York.	Going to Vermont.
MERCHANDISE — (<i>Continued</i>).				
Iron and steel.....	Pounds....	100,000	530,800	1,015,961
Railroad iron.....	Pounds....	.....	.....	3,890,400
All other merchandise	Pounds....	10,261,500	1,990,800	2,876,500
OTHER ARTICLES.				
Stone, lime and clay	Pounds....	31,765,725	4,659,500	8,038,100
Anthracite coal.....	Pounds....	172,677,496	159,752,048	151,946,856
Bituminous coal.....	Pounds....	6,662,500	3,783,900	8,697,800
Petroleum or earth oil, crude and refined	Barrels....	175	52	103
Sundries.....	Pounds....	1,191,400	721,300	416,900

STATEMENT showing the total quantity of shipments on the canal, at Whitehall, coming from Canada and Vermont.

ARTICLES.	Description.	CLEARED.		
		Coming from Canada.	Coming from New York.	Coming from Vermont.
THE FOREST.				
Product of wood:				
Boards and scantling	Feet	86,804,742	25,823,098	3,269,000
Shingles	M.		264	
Timber	Cubic feet.		527,992	
Staves	Pounds		601,600	260,000
Wood	Cords		4,977	
Ashes, leached	Bushels	7,000	7,000	
AGRICULTURE.				
Product of animals:				
Pork	Barrels			31
Vegetable food:				
Barley	Bushels	29,513		
Apples	Barrels		341	4,326
Potatoes	Bushels		149,790	
MANUFACTURES.				
Pig iron	Pounds		13,722,000	
Bloom and bar iron	Pounds		4,480,720	

Statement showing the total quantity of shipments on the canal, at Whitehall, coming from Canada and Vermont—(Concluded).

ARTICLES.	Description.	CLEARED.		
		Coming from Canada.	Coming from New York.	Coming from Vermont.
MERCHANDISE.				
Sugar	Pounds.....	.....	.....	70,000
Nails, spikes and horseshoes	Pounds.....	.....	.....	108,000
All other merchandise.....	Pounds.....	.....	.....	441,200
OTHER ARTICLES.				
Stone, lime and clay	Pounds.....	.....	8,460,000	2,267,700
Iron ore	Pounds.....	.....	513,946,980	.....
Sundries.	Pounds.....	2,839,200	1,970,100	362,000

VALUE of each article and value of all articles that went to New York from the canals during the season of 1888.

OFFICES.	THE FOREST — PRODUCT OF WOOD.							AGRICULTURE.		
								PRODUCT OF ANIMALS.	VEGETABLE FOOD.	
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, leached.	Lard, tallow and lard oil.	Flour.	Wheat.	
Albany	\$2,286,624	\$13,328	.....	.....	\$1,625	\$4,332	.....	\$900	\$4,072,835	
West Troy	3,798,076	4,600	\$193,975	\$5,200	5,320	6,866	\$3,600	1,446	11,086,896	
Waterford	108,561	.....	.....	.....	425	.....	.....	.....	.....
Total	\$6,193,261	\$17,928	\$193,975	\$5,200	\$7,370	\$11,198	\$3,600	\$2,346	\$15,159,731	

Value of each article and value of all articles that went to New York from the canals during the season of 1888—(Continued).

OFFICES.	AGRICULTURE—VEGETABLE FOOD.								ALL OTHER AGRICULTURAL PRODUCTS.
	Rye.	Corn.	Barley.	Barley malt.	Oats.	Peas and beans.	Apples.	Potatoes.	Flaxseed.
Albany .....	.....	\$2,101,932	\$226,149	\$230,443	\$433,251	\$106,065	\$17,884	\$20,970	\$72,357
West Troy	\$19,794	7,117,164	575,402	414,705	814,411	19,197	91,945	120,258	381,143
Waterford .....	.....	.....	.....	.....	.....	.....	12,701	125,755	.....
Total	\$19,794	\$9,219,096	\$801,551	\$645,148	\$1,247,662	\$125,262	\$122,530	\$266,983	\$453,500

VALUE of all the property carried on the canals during the season of 1888.

OFFICES.	THE FOREST — PRODUCT OF WOOD.							AGRICULTURE — PRO- DUCT OF ANIMALS.	
	Boards and scantling.	Shingles.	Timber.	Staves.	Wood.	Ashes, pot and pearl.	Ashes, leached.	Pork.	Beef.
Albany	\$106,750	.....	.....	.....	\$3,375	.....	.....	.....	.....
West Troy	402,761	\$4,132	\$49,828	.....	41,290	\$58,000	.....	.....	.....
Syracuse	77,508	1,320	2,784	\$38,877	41,745	.....	.....	\$2,557	\$2,975
Rochester	3,888	.....	1,553	3,535	4,664	27,033	.....	.....	.....
Tonawanda	6,402,989	112,851	88,677	.....	833	.....	.....	.....	.....
Buffalo	644,571	32,996	10,500	20,882	.....	1,470	.....	.....	.....
Waterford	2,029,759	.....	36,840	.....	37,715	.....	.....	.....	.....
Whitehall	2,317,937	792	52,799	8,616	19,908	.....	\$700	558	.....
Oswego	1,172,790	20,121	.....	7,705	7,902	.....	7,738	.....	.....
Geneva	52,800	.....	.....	.....	.....	.....	.....	.....	.....
Boonville	741,480	50	182,700	16,479	.....	.....	.....	4,480	.....
Total	\$13,953,233	\$172,262	\$425,681	\$96,094	\$157,432	\$86,503	\$8,438	\$7,595	\$2,975

Value of all the property carried on the canals during the season of 1888 — (Continued).

OFFICES.	AGRICULTURE — PRODUCT OF ANIMALS.					AGRICULTURE — VEGETABLE FOOD.			
	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.
Albany	\$8,556	\$30,076	.....	\$27,586
West Troy	\$269	....	....	2,100	42,470	.....	6,143
Syracuse	\$930	\$250	2,432	\$3,750	\$3,400	136,682	178,481	.....	41,259
Rochester	150	190,854	.....	5,220
Tonawanda	8,000	.....	.....
Buffalo	27,198	19,023,876	\$247,429	7,941,058
Waterford	2,292	.....	4,550	2,583
Whitehall
Oswego	150	....	....	21,342	73,532	.....	3,000
Geneva	258,540	26,879	.....
Boonville	96,231	1,386	.....	.....	14,338
Total	\$930	\$250	\$2,851	\$3,750	\$99,631	\$199,706	\$19,805,829	\$278,858	\$8,041,187

Value of all the property carried on the canals during the season of 1888 — (Continued).

OFFICES.	AGRICULTURE — VEGETABLE FOOD.								
	Corn meal.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.
Albany.....	\$18	\$9,209	.....	\$26,089	\$6,771	\$8,176	.....	.....	\$31,420
West Troy.....	.....	23,342	\$176,612	8,350	11,479	10,496	\$350	\$11,936	288,382
Syracuse.....	6,465	88,473	254,727	4,808	55,780	.....	67,958	52,812	.....
Rochester.....	.....	210,075	76,286	3,570	3,758	.....	9,617	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	9,755	.....	.....
Buffalo.....	.....	53,174	65,538	1,389,217	13,107	60,478	.....	.....	.....
Waterford.....	.....	.....	.....	3,780	120	.....	18,338	127,725	.....
Whitehall.....	.....	20,659	.....	.....	.....	.....	5,834	52,427	.....
Oswego.....	100	999,361	79,892	.....	740	16,392	600	.....	.....
Geneva.....	.....	64,711	75,850	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	3,862	1,547	.....	4,090	22,715	.....
Total.....	\$6,583	\$1,469,004	\$731,905	\$1,439,676	\$93,302	\$95,542	\$116,542	\$267,615	\$319,802

Value of all the property carried on the canals during the season of 1888 — (Continued).

OFFICES.	ALL OTHER AGRICULTURAL PRODUCTS.				MANUFACTURES.				
	Unmanu- factured tobacco.	Hemp.	Clover and grass seed.	Flaxseed.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.
Albany	\$2,340	.....	.....	\$2,896	\$19
West Troy	\$1,500	\$186,444	\$104,355	\$50,468	58,016	\$42,041	.....	8,460	58
Syracuse.....	4,851	.....
Rochester
Tonawanda
Buffalo	219,841	.....	.....	.....	.....	.....
Waterford	15,696	.....	6,000	.....
Whitehall
Oswego	79	.....	.....	1,400	.....
Geneva
Boonville	239,904	.....	.....
Total	\$1,500	\$186,444	\$104,355	\$270,309	\$60,435	\$57,737	\$239,904	\$23,607	\$77

Value of all the property carried on the canals during the season of 1888 — (Continued).

OFFICES.	MANUFACTURES.						MERCHANDISE.	
	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Domestic cottons.	Domestic salt.	Foreign salt.	Sugar.	Molasses.
Albany.....	\$99,023	\$4,200	\$31,234	.....	.....	\$21,837	\$90,468	\$33,540
West Troy.....	295,925	161,844	540,398	\$9,800	\$14,947	76,920	440,010	180,036
Syracuse.....	4,628	.....	5,412	.....	872,763	.....	12,075	.....
Rochester.....	.....	.....	.....	.....	84,693	.....	.....	.....
Tonawanda.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo.....	190,785	.....	22,911	.....	.....	.....	.....	.....
Waterford.....	17,709	22,972	116,529	.....	.....	22,583	75,483	75,282
Whitehall.....	137,220	67,211	.....	.....	.....	.....	4,900	.....
Oswego.....	.....	.....	4,000	.....	.....	.....	.....	.....
Geneva.....	.....	.....	.....	.....	.....	.....	.....	.....
Boonville.....	.....	.....	.....	.....	577	.....	10,365	.....
Total.....	\$745,290	\$256,227	\$720,484	\$9,800	\$972,980	\$121,340	\$633,301	\$288,858

Value of all the property carried on the canals during the season of 1888 — (Continued).

OFFICES. }	MERCHANDISE.					OTHER ARTICLES.		
	Coffee.	Nails, spikes and horseshoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glass- ware.	All other merchandise.	Stone, lime and clay.	Gypsum.
Albany	\$5,520	\$1,388,083	\$29,904	\$13,835	\$11,061,531	\$452,241	.....
West Troy	\$11,200	19,061	3,847,626	129,030	5,810	32,197,895	1,424,360	.....
Syracuse	360	10,584	.....	66,665	2,413,350	1,294,701	\$14,302
Rochester	2,689	.....	6,066	288,603	419,828	.....
Tonawanda	1,000	96,913	.....
Buffalo	150	.....	.....	400	13,665	.....
Waterford	32,616	.....	3,360	.....	4,248,249	592,380	.....
Whitehall	3,240	.....	.....	.....	88,240	53,638	.....
Oswego	240	.....	1,080	13,660	7,252	.....
Geneva	38,931	.....
Boonville	1,472	.....	.....	.....	100,135	2,786	.....
Total	\$11,200	\$62,269	\$5,249,372	\$162,294	\$93,456	\$50,413,063	\$4,396,696	\$14,302

Value of all the property carried on the canals during the season of 1888 — (Concluded).

OFFICES.	OTHER ARTICLES.						Total tons.
	Rock and superphosphates.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
Albany	\$95,935	\$265,857	\$470	\$4,956	.....	\$25,094	\$13,887,009
West Troy	244,938	1,442,085	76,069	1,216	\$9,188	1,353,900	44,071,540
Syracuse .....	.....	1,822,392	57,348	15,602	.....	336,134	7,997,140
Rochester .....	.....	170,443	591	.....	.....	5,555	1,521,671
Tonawanda .....	.....	.....	960	.....	.....	783,127	7,505,105
Buffalo .....	.....	.....	18,630	105	.....	686,505	30,700,182
Waterford .....	.....	345,705	34,704	.....	.....	.....	7,857,274
Whitehall .....	.....	.....	.....	.....	770,920	310,278	3,915,878
Oswego .....	.....	20,000	.....	.....	.....	1,600	2,460,676
Geneva .....	.....	598,760	16,217	.....	.....	14,625	1,147,313
Boonville .....	.....	9,139	356	.....	.....	6,855	1,460,947
Total	\$340,873	\$4,674,381	\$205,345	\$21,879	\$780,108	\$3,523,673	\$122,524,735

OFFICIAL ANNUAL STATEMENT of lake and canal rates, Buffalo, November 30, 1888.

DATE.	LUMBER.		WHEAT.		CORN.	
	Canal rates per 1,000 feet.		Lake rates per bushel.	Canal rates per bushel.	Lake rates per bushel.	Canal rates per bushel.
May 31	From Buffalo	From Buffalo	Cts.	Cts.	Cts.	Cts.
June 30	to Albany....\$1 56	to New York..\$2 03	From Chicago	From Buffalo	From Chicago	From Buffalo
July 31	From Buffalo	From Buffalo	to Buffalo... .210	to New York.. .318	to Buffalo... .185	to New York.. .270
August 31	to Albany.... 1 43	to New York.. 1 88	From Chicago	From Buffalo	From Chicago	From Buffalo
September 30...	From Buffalo	From Buffalo	to Buffalo... .188	to New York.. .279	to Buffalo... .173	to New York.. .222
October 31	to Albany.... 1 40	to New York.. 1 90	From Chicago	From Buffalo	From Chicago	From Buffalo
November 30 ...	From Buffalo	From Buffalo	to Buffalo... .200	to New York.. .249	to Buffalo... .193	to New York.. .225
	to Albany.... 1 61	to New York.. 2 11	From Chicago	From Buffalo	From Chicago	From Buffalo
	From Buffalo	From Buffalo	to Buffalo... .303	to New York.. .338	to Buffalo... .284	to New York.. .365
	to Albany.... 1 75	to New York.. 2 25	From Chicago	From Buffalo	From Chicago	From Buffalo
	From Buffalo	From Buffalo	to Buffalo... .355	to New York.. .392	to Buffalo... .330	to New York.. .357
	to Albany.... 1 75	to New York.. 2 25	From Chicago	From Buffalo	From Chicago	From Buffalo
	From Buffalo	From Buffalo	to Buffalo... .253	to New York.. .375	to Buffalo... .224	to New York.. .335
	to Albany.... 2 00	to New York.. 2 50	From Chicago	From Buffalo	From Chicago	From Buffalo
			to Buffalo... .240	to New York.. .382	to Buffalo... .244	to New York.. .337

I certify the above statement to be correct.

WILLIAM C. O'NEIL,
Collector of Statistics.

BUFFALO, ERIE COUNTY, N. Y., November 30, 1888.

The following statement shows the average lake and canal rates on wheat and corn since 1880:

YEAR.	Freight, Buffalo to New York.	Tolls.	Freight, not including tolls.	Lake freight.
1880.	c. m. fr.	c. m. fr.	c. m. fr.	c. m. fr.
Wheat.....	6 5 0	1 0 3	5 4 7	5 7 0
Corn.....	6 0 0	0 9 6	5 0 4	5 0 0
1881.				
Wheat.....	4 8 8	1 0 3	3 8 5	3 4 0
Corn.....	4 3 7	0 9 6	3 4 1	2 9 2
1882.				
Wheat.....	5 3 8	1 0 3	4 3 5	2 6 1
Corn.....	4 8 7	0 9 6	3 9 1	2 2 1
1883.				
Wheat.....	4 8 8	Free.	.....	3 4 7
Corn.....	4 4 7	Free.	.....	3 1 1
1884.				
Wheat.....	4 2 0	Free.	.....	2 0 7
Corn.....	3 7 6	Free.	.....	1 8 4
1885.				
Wheat.....	3 8 1	Free.	.....	3 0 6
Corn.....	3 4 8	Free.	.....	1 7 1
1886.				
Wheat.....	5 0 3	Free.	.....	3 6 1
Corn.....	4 5 5	Free.	.....	3 3 7
1887.				
Wheat.....	4 4 4	Free.	.....	4 0 3
Corn.....	4 0 4	Free.	.....	3 7 7
1888.				
Wheat.....	3 4 1	Free.	.....	2 4 9
Corn.....	3 0 1	Free.	.....	2 3 3

ANNUAL STATEMENT of sundry articles going west from the east on the Erie canal at Buffalo, from May 10 to November 30, 1888, inclusive.

FOR THE STATES NAMED.

	Sugar.	Molasses.	Coffee.	Railroad iron.	Crockery and glassware.	Merchandise.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Ohio	210,212	206,860	.....	6,640,454	.....	5,363,258
Michigan	213,220	218,660	.....	.....	.....	5,319,085
Illinois	364,287	801,525	30,000	.....	.....	10,869,273
Wisconsin	203,110	256,100	.....	.....	.....	5,371,342
Indiana	193,170	156,275	.....	.....	.....	4,675,460
Minnesota	410,000	613,200	26,000	.....	.....	12,498,660
Iowa	190,000	203,150	.....	.....	.....	4,695,120
New York	260,161	356,325	.....	100,000	1,000	5,581,924
Total	2,044,160	2,812,095	56,000	6,740,454	1,000	54,374,122

ANNUAL STATEMENT of property going east from the west, on the Erie canal at Buffalo, from May 10 to November 30, 1888,
inclusive.

FROM THE STATES NAMED.

	Lumber, feet.	Timber, cubic feet.	Shingles, thousands.	Wheat, bushels.	Flour, barrels.	Rye, bushels.	Corn, bushels.	Barley, bushels.	Oats, bushels.	Merchan- dise, pounds.
Ohio.....	920,000	.....	.....	2,107,100	....	.....	519,553	.....	222,300	.....
Michigan..	29,797,811	35,000	9,027½	1,875,416	....	.....	698,600	.....	205,200	.....
Illinois...	.....	.....	.....	4,712,594	....	290,545	13,462,640	66,217½	2,743,790	.....
Wisconsin.	2,825,701	.....	400	2,859,633	....	102,200	1,217,465	.....	345,845	.....
Indiana...	.....	.....	.....	441,050	....	.....	518,200	.....	319,872	.....
Minnesota.	.....	.....	.....	3,507,368	....	.....	695,000	.....	311,643	.....
Iowa.....	.....	.....	.....	114,350	....	.....	535,338	.....	159,000	.....
Canada....	2,265,953	.....	.....	40,000	.....	.....	.....	.....	.....	.....
New York.	.....	.....	.....	.....	4,945	.....	.....	.....	.....	4,000
Total...	35,809,465	35,000	9,427½	15,657,511	4,945	392,745	17,646,796	66,217½	4,307,650	4,000

The following table shows the separate tonnage of the New York Central, the Erie Railway and the canals each year since 1853, with the losses or gains of each year compared with the preceding year :

CANALS AND RAILROADS.				
	1853.	1854.	Gain in 1854.	Loss in 1854.
New York Canals, tons.....	4,247,853	4,165,862	.....	81,991
New York Central Railroad, tons.....	360,000	549,804	189,804	.....
New York and Erie Railroad, tons.....	631,039	743,250	112,211	.....
	5,238,892	5,458,916	302,015	81,991
	1854.	1855.	Gain in 1855.	Loss in 1855.
New York Canals, tons.....	4,165,862	4,022,617	.....	143,245
New York Central Railroad, tons.....	549,804	670,073	120,269	.....
New York and Erie Railroad, tons.....	743,250	842,048	19,798	.....
	5,458,916	5,534,738	219,067	143,245
	1855.	1856.	Gain in 1856.	Loss in 1856.
New York Canals, tons.....	4,022,617	4,116,084	93,465	.....
New York Central Railroad, tons.....	670,073	776,112	106,039	.....
New York and Erie Railroad, tons.....	842,048	943,215	101,167	.....
	5,534,738	5,835,409	300,671	.....

New York Canals, tons.....	1856. 4,116,082	1857. 3,344,061	Gain in 1857.	Loss in 1857. 772,021
New York Central Railroad, tons.....	776,112	838,791	62,679	.....
New York and Erie Railroad, tons.....	943,215	978,066	34,851	.....
	5,835,409	5,160,918	97,530	772,021
New York Canals, tons.....	1858. 3,344,061	1858. 3,665,192	Gain in 1858. 321,131	Loss in 1858.
New York Central Railroad, tons.....	838,791	765,407	.....	73,284
New York and Erie Railroad, tons.....	978,066	816,054	.....	161,112
	5,160,918	5,247,553	321,131	234,496
New York Canals, tons.....	1859. 3,665,192	1859. 3,781,684	Gain in 1859. 116,492	Loss in 1859.
New York Central Railroad, tons.....	765,407	834,319	68,912	.....
New York and Erie Railroad, tons.....	816,954	869,073	53,119	.....
	5,247,553	5,485,076	238,523	.....
New York Canals, tons.....	1860. 3,781,684	1860. 4,650,214	Gain in 1860. 868,530	Loss in 1860.
New York Central Railroad, tons.....	834,319	1,029,183	193,864	.....
New York and Erie Railroad, tons.....	869,073	1,139,554	270,481	.....
	5,485,076	6,817,951	1,332,875	.....

Showing the separate tonnage of the New York Central, the Erie Railway and the canals each year since 1853—(Continued).

CANALS AND RAILROADS.				1860.	1861.	Gain in 1861.	Loss in 1861.
New York Canals, tons				4,650,214	4,507,635	.....	142,579
New York Central Railroad, tons				1,028,183	1,167,302	139,119	.....
New York and Erie Railroad, tons				1,139,554	1,253,418	113,864	.....
				6,817,951	6,928,355	252,983	142,579
New York Canals, tons				1861. 4,507,635	1862. 5,598,785	Gain in 1862. 1,091,150	Loss in 1862.
New York Central Railroad, tons				1,167,302	1,387,433	220,131	.....
Erie Railway, tons				1,253,418	1,632,955	379,537	.....
				6,928,355	8,619,173	1,690,818	.....
New York Canals, tons				1862. 5,598,785	1863. 5,557,692	Gain in 1863.	Loss in 1863. 41,093
New York Central Railroad, tons				1,387,433	1,449,604	62,171	.....
Erie Railway, tons				1,632,955	1,815,096	182,141	.....
				8,619,173	8,822,392	244,312	41,093

	1863.	1864.	Gain in 1864.	Loss in 1864.
New York Canals, tons.....	5,557, 692	4,852, 941	.....	704, 751
New York Central Railroad, tons	1,449, 604	1,557, 148	107, 544	.....
Erie Railway, tons.....	1,815, 096	2,170, 798	355, 702	.....
	8,822, 392	8,580, 887	463, 246	704, 751

	1864.	1865.	Gain in 1865.	Loss in 1865.
New York Canals, tons.....	4,852, 941	4,729, 654	.....	123, 287
New York Central Railroad, tons.....	1,557, 148	1,275, 299	.....	281, 849
Erie Railway, tons.....	2,170, 798	2,234, 350	63, 552	.....
	8,580, 887	8,239, 303	63, 552	405, 136

	1865.	1866.	Gain in 1866.	Loss in 1866.
New York Canals, tons.....	4,729, 654	5,775, 220	1,045, 566	.....
New York Central Railroad, tons.....	1,275, 299	1,602, 197	326, 898	.....
Erie Railway, tons.....	2,234, 350	3,242, 792	1,008, 442	.....
	8,239, 303	10,620, 209	2,380, 906	.....

	1866.	1867.	Gain in 1867.	Loss in 1867.
New York Canals, tons.....	5,775, 220	5,688, 325	.....	86, 895
New York Central Railroad, tons.....	1,602, 197	1,667, 926	65, 729	.....
Erie Railway, tons.....	3,242, 792	3,484, 546	241, 754	.....
	10,620, 209	10,840, 797	307, 483	86, 895

Showing the separate tonnage of the New York Central, the Erie Railway and the canals each year since 1853—(Continued).

CANALS AND RAILROADS.				
	1867.	1868.	Gain in 1868.	Loss in 1868.
New York Canals, tons.....	5,688,325	6,442,225	753,900	.....
New York Central Railroad, tons.....	1,667,926	1,846,599	178,673	.....
Erie Railway, tons.....	3,484,546	3,908,243	423,697	.....
	10,840,797	12,197,067	1,356,270	.....
New York Canals, tons.....	^{1869.} 6,442,225	^{1869.} 5,859,080	Gain in 1869.	Loss in 1869. 583,145
New York Central Railroad, tons.....	1,846,599	2,281,885	435,286	.....
Erie Railway, tons.....	3,908,243	4,312,209	403,966	.....
	12,197,067	12,453,174	839,252	583,145
New York Canals, tons.....	^{1869.} 5,859,080	^{1870.} 6,173,769	Gain in 1870. 314,689	Loss in 1870.
New York Central Railroads, tons.....	2,281,885	4,122,000	1,840,115	.....
Erie Railway, tons.....	4,312,209	4,852,505	540,296	.....
	12,453,174	15,148,274	2,695,100	.....

	1870.	1871.	Gain in 1871.	Loss in 1871.
New York Canals, tons.....	6,173,769	6,467,888	294,119	.....
New York Central Railroad, tons.....	4,122,000	4,532,056	410,056	.....
Erie Railway, tons.....	4,852,505	4,844,208	.....	8,297
	15,148,274	15,844,152	704,175	8,297

	1871.	1872.	Gain in 1872.	Loss in 1872.
New York Canals, tons.....	6,467,888	6,673,370	205,482	.....
New York Central Railroad, tons.....	4,532,056	4,398,965	.....	138,091
Erie Railway, tons.....	4,844,208	5,564,274	720,066	.....
	15,844,152	16,631,609	925,548	138,091

	1872.	1873.	Gain in 1873.	Loss in 1873.
New York Canals, tons.....	6,673,370	6,364,782	.....	308,588
New York Central Railroad, tons.....	4,398,965	5,522,724	1,128,759	.....
Erie Railway, tons.....	5,564,274	6,312,702	748,430	.....
	16,631,609	18,200,208	1,877,189	308,588

	1873.	1874.	Gain in 1874.	Loss in 1874.
New York Canals, tons.....	6,364,782	5,804,588	.....	560,194
New York Central Railroad, tons.....	5,522,724	6,114,678	591,954	.....
Erie Railway, tons.....	6,312,702	6,364,276	51,574	.....
	18,200,208	18,283,542	643,528	560,194

Showing the separate tonnage of the New York Central, the Erie Railway and the canals each year since 1853.— (Continued).

CANALS AND RAILROADS.		1874.	1875.	Gain in 1875.	Loss in 1875.
New York Canals, tons	.....	5,804,588	4,859,858	.....	944,730
New York Central Railroad, tons	.....	6,114,678	6,001,954	.....	112,724
Erie Railway, tons	.....	6,364,276	6,239,946	.....	124,330
		18,283,542	17,101,758	.....	1,181,784
New York Canals, tons	.....	¹⁸⁷⁵ 4,859,858	¹⁸⁷⁶ 4,172,129	Gain in 1876.	Loss in 1876. 687,729
New York Central Railroad, tons	.....	6,001,954	6,803,680	801,726	.....
Erie Railway, tons	.....	6,239,946	5,972,818	.....	267,128
		17,101,758	16,948,627	801,726	954,857
New York Canals, tons	.....	¹⁸⁷⁶ 4,172,129	¹⁸⁷⁷ 4,955,963	Gain in 1877. 783,834	Loss in 1877.
New York Central Railroad, tons	.....	6,803,680	6,351,356	.....	452,324
Erie Railway, tons	.....	5,972,818	6,182,451	209,633	.....
		16,948,627	17,489,770	993,467	452,324

New York Canals, tons	1877. 4,955,963	1878. 5,171,320	Gain in 1878. 215,357	Loss in 1878.
New York Central Railroad, tons	6,351,356	7,695,413	1,344,057	.....
Erie Railway, tons	6,182,451	6,150,568	.....	31,883
	17,480,770	19,017,301	1,559,414	31,883
New York Canals, tons	1878. 5,171,320	1879. 5,362,372	Gain in 1879. 191,052	Loss in 1879.
New York Central Railroad, tons	7,695,413	9,015,753	1,320,340	.....
Erie Railway, tons	6,150,568	8,212,641	2,062,073	.....
	19,017,301	22,590,766	3,573,465	.....
New York Canals, tons	1879. 5,362,372	1880. 6,457,556	Gain in 1880. 1,095,284	Loss in 1880.
New York Central Railroad, tons	9,015,753	10,538,038	1,517,285	.....
Erie Railway, tons	8,212,641	8,715,892	503,251	.....
	22,590,766	25,706,586	3,115,820	.....
New York Canals, tons	1880. 6,457,656	1881. 5,179,192	Gain in 1881.	Loss in 1881. 1,278,464
New York Central Railroad, tons	10,533,038	11,591,379	1,058,341	.....
Erie Railway, tons	8,715,892	11,086,823	2,370,931	.....
	25,706,586	27,857,394	3,429,272	1,278,464

Showing the separate tonnage of the New York Central, the Erie Railway and the canals each year since 1853—(Concluded).

CANAL AND RAILROADS.				1881.	1882.	Gain in 1882.	Loss in 1882.
New York Canals, tons				5,179,192	5,467,423	228,231	.....
New York Central Railroad, tons				11,591,379	11,330,393	.....	260,986
Erie Railway, tons				11,036,823	11,895,238	808,415	.....
				27,857,394	28,693,054	1,096,646	260,986
New York Canals, tons				1882. 5,467,423	1883. 5,664,056	Gain in 1883. 196,633	Loss in 1883.
New York Central Railroad, tons				11,330,393	10,892,440	.....	437,953
Erie Railway, tons				11,895,238	13,610,623	1,715,385	.....
New York Canals, tons				1883. 5,664,056	1884. 5,009,488	Gain in 1884.	Loss in 1884. 654,568
New York Central Railroad, tons				10,892,440	10,212,418	.....	680,022
Erie Railway, tons				*13,610,623	†16,219,598	†2,608,975	.....
New York canals, tons				1884. 5,009,488	1885. 4,731,784	Gain in 1885.	Loss in 1885. 277,704
New York Central Railroad, tons				10,212,418	10,733,499	521,081	.....
Erie Railway, tons				11,071,938	10,253,489	.....	818,449
New York, Buffalo and West Shore Railroad, tons				839,539	1,825,176	985,637	.....

New York canals, tons	1885. 4,731,784	1886. 5,293,982	Gain in 1886. 562,198	Loss in 1886.
New York Central railroad, tons	10,733,499	12,636,435	\$1,902,936	.....
Erie railway, tons	10,253,489	¶18,668,238	¶8,414,750	.....
New York, Buffalo and West Shore railroad, tons	1,825,176	431,409	.....	1,393,767
<hr/>				
New York canals, tons	1885. 5,293,982	1886. 5,553,805	Gain in 1886. 259,823	Loss in 1886.
New York Central railroad, tons	12,636,485	14,531,726	1,895,291	.....
Erie railway, tons	18,668,238	13,949,260	.....	4,718,978
<hr/>				
New York canals, tons	1887. 5,553,805	1888. 4,942,948	Gain in 1888.	Loss in 1888. 610,857
New York Central railroad, tons	14,531,726	15,162,812	631,086	.....
Erie railway, tons	13,949,260	15,174,009	1,224,749	.....

* Of this amount 1,645,133 tons is the tonnage for five months of the N. Y. P. and O. R. R. Co., leased by the Erie.

† Of this amount 5,147,660 tons is the tonnage for twelve months of the N. Y. P. and O. R. R. Co., leased by the Erie.

‡ An apparent gain, deducting the tonnage of the N. Y. P. and O. for seventeen months, the tonnage of the New York, Lake Erie and Western shows a loss in 1884 of 893,552.

¶ Of this amount 5,861,321 tons is the tonnage of the N. Y. P. and O. R. R.

§ Net gain, 2,553,429 tons.

¶ An apparent gain, which is caused by the additional tonnage of the N. Y. B. and W. S. R. R.

The whole number of clearances issued during the season of 1888 was 36,246, and were issued at the following offices :

Albany	4,254
West Troy	7,682
Syracuse	4,765
Rochester	1,834
Tonawanda	3,200
Buffalo	5,958
Waterford	2,760
Whitehall	2,862
Oswego	815
Geneva	947
Boonville	1,169
Total	36,246

The total tons coming to tide-water for each of the fifty years and the aggregate value thereof, in market, was as follows :

YEARS.	Tons.	Value
1838	640,481	\$23,038,510
1839	602,128	20,163,199
1840	669,012	23,213,573
1841	774,334	27,225,322
1842	666,626	22,751,013
1843	836,861	28,453,408
1844	1,019,094	34,183,167
1845	1,204,943	45,452,321
1846	1,362,319	51,105,256
1847	1,744,283	73,092,414
1848	1,447,905	50,883,907
1849	1,579,946	52,375,521
1850	2,033,863	55,474,637
1851	1,977,151	53,927,508
1852	2,234,822	66,893,102
1853	2,505,797	73,688,044
1854	2,223,743	72,120,681
1855	1,890,593	74,177,937
1856	2,123,469	74,286,735
1857	1,617,187	51,190,018
1858	1,985,142	61,536,061
1859	2,121,672	43,175,312
1860	2,854,877	78,798,617
1861	2,980,144	81,432,759
1862	3,402,709	111,176,568

Total tons coming to tide-water — (Continued).

YEARS.	Tons.	Value.
1863.....	3,274,727	\$123,173,294
1864.....	2,805,257	145,609,202
1865.....	2,730,181	113,865,846
1866.....	3,305,607	131,801,477
1867.....	3,029,695	120,902,834
1868.....	3,240,806	136,446,582
1869.....	3,096,142	144,866,060
1870.....	3,156,302	105,517,620
1871.....	3,494,801	106,874,570
1872.....	3,647,944	107,086,562
1873.....	3,376,649	97,869,497
1874.....	3,123,112	107,976,476
1875.....	2,608,777	89,447,518
1876.....	2,426,182	73,893,878
1877.....	2,986,812	76,787,713
1878.....	3,637,101	78,563,710
1879.....	3,286,176	96,992,498
1880.....	4,067,402	143,572,991
1881.....	3,065,839	68,785,451
1882.....	3,068,152	74,303,139
1883.....	2,892,176	66,219,034
1884.....	2,900,788	66,718,124
1885.....	2,715,219	55,130,473
1886.....	3,215,177	67,517,864
1887.....	3,158,923	71,755,221
1888.....	2,584,661	58,801,036

The tons of the total movement of articles on all the canals, from 1837 to 1888, both years inclusive, were as follows:

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837.....	618,741	208,043	81,735	94,777	168,000	1,171,296
1838.....	265,089	255,227	101,526	124,290	186,879	1,333,011
1839.....	667,581	266,052	111,968	132,286	257,826	1,435,713
1840, Genesee Valley canal opened	587,647	393,780	100,367	112,021	222,231	1,416,046
1841.....	645,548	391,905	127,896	141,054	215,258	1,521,661
1842.....	504,597	401,276	98,968	101,446	130,644	1,236,931
1843.....	687,184	455,797	124,277	119,209	126,972	1,513,439
1844.....	881,774	509,387	144,245	141,930	156,651	1,816,586
1845.....	916,976	555,160	160,638	151,450	228,543	1,977,565
1846.....	1,087,714	814,258	149,006	169,799	218,623	2,268,662
1847.....	1,086,880	1,092,946	176,448	224,890	287,812	2,869,810
1848.....	1,104,940	913,824	202,781	261,458	331,287	2,796,230
1849.....	864,373	1,020,259	203,990	255,455	310,088	2,894,732
1850.....	1,261,991	965,619	200,218	269,370	379,419	3,076,617
1851.....	1,393,698	1,125,264	222,529	365,404	475,838	3,582,733
1852.....	1,586,080	1,213,357	207,955	420,295	435,754	3,863,441
1853.....	1,821,525	1,150,924	230,036	458,327	587,041	4,247,853
1854.....	1,768,745	992,839	258,021	406,022	740,235	4,165,862
1855.....	1,534,934	1,047,344	281,873	374,402	784,064	4,022,617
1856.....	1,478,674	1,192,673	284,901	370,758	789,076	4,116,082
1857.....	1,364,002	767,370	232,803	222,954	756,932	3,344,061
1858.....	1,232,968	1,279,891	295,903	188,441	667,989	3,665,192
1859.....	1,542,035	816,784	299,421	211,182	912,262	3,781,684
1860.....	1,509,977	1,682,754	208,759	250,360	938,364	4,650,214
1861.....	1,052,392	2,144,373	280,256	135,096	895,518	4,507,635
1862.....	1,569,674	2,494,036	364,877	167,927	1,002,271	4,598,785

1863.	1,628,688	2,236,075	319,432	172,278	1,201,219	5,557,692
1864.	1,478,921	1,572,836	282,354	143,984	1,374,846	4,852,941
1865.	1,467,315	1,696,091	281,832	154,968	1,129,448	4,729,654
1866.	1,769,994	1,786,060	302,241	179,878	1,737,047	5,775,220
1867.	1,744,252	1,432,517	320,844	319,880	1,964,832	5,688,325
1868.	1,958,309	1,442,147	373,262	324,064	2,344,443	6,442,225
1869.	1,855,930	1,314,071	342,239	268,970	2,077,870	5,850,080
1870.	1,916,511	1,309,153	352,497	271,856	3,333,752	6,173,769
1871.	1,941,297	1,863,868	336,288	288,428	2,038,007	6,467,888
1872.	1,950,798	1,683,962	325,564	298,758	2,414,288	6,673,370
1873.	1,582,072	1,750,418	267,820	172,990	2,591,482	6,364,782
1874.	1,482,753	1,772,583	246,697	132,181	2,170,374	5,804,588
1875.	1,250,546	1,311,613	275,731	110,141	1,911,827	4,859,858
1876.	1,175,313	1,067,497	180,201	64,943	1,684,175	4,172,129
1877.	1,312,523	1,522,317	184,218	83,010	1,853,892	4,955,963
1878.	1,364,120	1,921,236	220,063	138,064	1,527,837	5,171,320
1879.	1,368,849	1,850,347	255,303	237,071	1,650,802	5,362,372
1880.	1,533,764	2,408,358	278,114	355,165	1,849,255	6,457,656
1881.	1,652,543	1,171,400	250,961	325,775	1,778,513	5,179,192
1882.	1,771,743	1,173,257	187,535	283,174	2,051,714	5,467,423
1883.	1,828,643	1,394,581	242,649	310,844	1,887,339	5,664,056
1884.	1,671,706	1,264,237	205,013	300,480	1,568,052	5,009,488
1885.	1,595,632	1,108,711	194,714	220,237	1,612,490	4,731,784
1886.	1,523,496	1,537,331	165,760	397,249	1,670,146	5,293,982
1887.	1,529,809	1,590,509	212,216	378,734	1,842,537	5,553,805
1888.	1,389,728	1,177,587	153,905	206,437	2,015,291	4,942,948

Total tons of each class of articles which came to the Hudson river from Erie and Champlain canals, from 1837 to 1888, both inclusive, were as follows:

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total tons.
1837.....	385, 017	151, 469	10, 124	394	64, 777	611, 781
1838.....	400, 877	182, 142	8, 487	298	48, 677	640, 481
1839.....	377, 720	163, 785	8, 565	499	51, 559	602, 128
1840.....	321, 709	302, 356	8, 665	104	36, 178	669, 012
1841.....	449, 095	270, 240	17, 891	155	36, 953	774, 334
1842.....	321, 480	293, 177	16, 015	185	35, 769	666, 626
1843.....	416, 173	346, 140	29, 493	201	44, 854	836, 861
1844.....	545, 202	383, 363	39, 957	246	62, 627	1, 031, 395
1845.....	607, 930	447, 627	49, 812	253	99, 321	1, 204, 943
1846.....	603, 010	628, 454	46, 076	1, 797	82, 982	1, 362, 319
1847.....	666, 113	897, 717	51, 532	4, 831	124, 090	1, 744, 283
1848.....	603, 272	685, 896	44, 867	6, 343	107, 527	1, 447, 905
1849.....	665, 547	769, 600	44, 288	5, 873	94, 638	1, 579, 949
1850.....	947, 768	926, 048	39, 669	7, 105	113, 273	2, 033, 863
1851.....	913, 268	891, 420	52, 302	4, 580	115, 581	1, 977, 151
1852.....	1, 064, 677	989, 268	47, 512	10, 605	122, 760	2, 234, 822
1853.....	1, 340, 261	932, 189	52, 817	12, 633	167, 897	2, 505, 797
1854.....	1, 103, 018	846, 447	40, 082	14, 632	219, 564	2, 223, 743
1855.....	877, 805	782, 604	44, 844	15, 559	174, 781	1, 895, 593
1856.....	858, 771	1, 023, 417	50, 454	14, 073	176, 754	2, 123, 469
1857.....	798, 986	561, 894	55, 611	16, 987	183, 709	1, 617, 187
1858.....	817, 613	929, 789	74, 981	15, 233	147, 526	1, 985, 142
1859.....	1, 123, 607	610, 317	63, 079	15, 804	308, 865	2, 121, 672
1860.....	1, 137, 873	1, 373, 393	66, 969	11, 235	265, 407	2, 854, 877

1861	690,586	1,934,247	43,074	8,405	303,832	2,980,144
1862	968,062	2,152,159	45,502	5,470	231,516	3,402,709
1863	1,049,559	1,898,253	56,268	5,123	265,524	3,274,727
1864	1,106,148	1,320,562	79,480	3,469	295,598	2,805,257
1865	1,051,616	1,379,331	58,211	4,302	236,721	2,730,181
1866	1,329,884	1,542,035	60,180	6,372	367,136	3,305,607
1867	1,359,287	1,143,712	77,250	5,196	444,250	2,029,695
1868	1,459,353	1,229,554	89,814	5,058	453,370	3,237,149
1869	1,453,419	1,087,105	84,623	4,122	465,873	3,096,142
1870	1,465,517	1,049,586	91,166	12,118	537,915	3,156,302
1871	1,347,979	1,571,754	94,911	7,603	473,554	3,495,801
1872	1,467,865	1,490,248	80,936	7,672	601,223	3,647,944
1873	1,308,471	1,421,469	46,421	12,091	588,197	3,376,649
1874	1,192,681	1,470,872	49,426	12,905	497,228	3,223,112
1875	813,275	1,175,495	70,209	8,341	541,457	2,608,777
1876	890,725	906,483	44,268	4,364	580,342	2,426,182
1877	978,366	1,362,700	53,545	5,341	586,860	2,986,812
1878	1,120,666	1,833,266	56,108	7,367	619,694	3,637,101
1879	1,043,970	1,710,539	46,928	15,299	469,440	3,286,176
1880	1,202,207	2,090,283	39,397	30,264	705,251	4,067,402
1881	1,367,938	1,165,347	53,013	15,466	464,085	3,065,839
1882	1,397,816	1,024,318	61,876	24,154	559,988	3,068,152
1883	1,403,174	1,234,463	47,910	27,798	449,152	3,162,497
1884	1,097,450	1,054,041	56,899	45,538	377,259	2,631,190
1885	1,284,213	949,870	61,912	48,185	371,039	2,715,219
1886	1,202,190	1,400,301	50,704	65,988	495,708	3,215,177
1887	1,206,279	1,412,166	52,566	21,710	466,202	3,158,923
1888	1,074,279	972,746	73,027	20,364	444,245	2,584,661

Exports of flour, wheat and corn from New York, Baltimore, Philadelphia, Boston, New Orleans and Montreal, and the percentage of the exports from each port.

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
	1880.	1880.	1880.			
New York.....	4,215,415	61,909,929	49,875,430	56.2	49.3	43.9
Boston	1,105,473	3,513,817	11,454,256	14.7	02.8	10.0
Philadelphia	288,656	12,342,492	18,172,396	03.8	09.9	16.0
Baltimore	525,985	33,678,376	15,244,895	07.0	26.8	13.4
Montreal.....	729,007	9,084,266	7,622,161	09.9	07.1	06.8
New Orleans.....	626,418	5,169,497	11,177,045	08.4	04.1	09.9
Total.....	7,500,950	125,698,377	113,546,183			
During the year 1880 the canal carried through						
freight going east.....	17,166	29,285,366	39,154,785	00.2	23.2	34.4
	1881.	1881.	1881.			
New York.....	4,507,052	41,788,708	31,614,480	59.9	48.2	42.7
Boston	1,109,583	3,081,232	8,038,627	14.8	03.6	10.8
Philadelphia	190,842	8,860,522	6,799,457	02.5	10.2	09.2
Baltimore.....	437,701	19,682,935	12,650,303	05.8	22.7	17.2
Montreal.....	632,821	6,554,622	3,359,084	08.4	07.6	04.5
New Orleans.....	642,460	6,707,982	11,508,685	08.6	07.7	15.6
Total.....	7,520,459	86,676,001	73,970,636			

Exports of flour, wheat and corn from New York, etc.—(Continued).

	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.			
	Flour.	Wheat.	Corn.	
During the year 1881 the canals carried through freight going east	Flour, barrels.	Wheat, bushels.	Corn, bushels.	
	1881.	1881.	1881.	
	.....	12, 146, 166	15, 056, 571	.....
New York.....	1882.	1882.	1882.	
	4, 619, 499	37, 020, 103	9, 012, 373	55.5
Boston	1, 468, 146	2, 843, 058	2, 100, 503	17.6
Philadelphia.....	246, 147	5, 759, 947	839, 024	02.9
Baltimore	490, 734	17, 465, 976	1, 126, 055	05.9
Montreal.....	775, 862	6, 913, 290	672, 850	09.3
New Orleans.....	729, 749	2, 890, 698	4, 024, 325	08.8
Total	8, 330, 137	72, 893, 072	17, 775, 130	
During the year 1882 the canals carried through freight going east .....	.....	18, 901, 666	7, 276, 607	.....
	1883.	1883.	1883.	
	4, 330, 146	20, 049, 200	22, 222, 754	56.3
Boston.....	1, 766, 172	694, 384	4, 634, 509	22.9
Philadelphia	362, 877	4, 372, 777	5, 435, 642	4.7
Baltimore	441, 477	15, 245, 868	10, 012, 247	5.7
				43.6
				01.5
				09.5
				09.5
				33.1
				44.5
				09.3
				10.9
				20.1
				40.9

Exports of flour, wheat and corn from New York, etc. — (Continued).

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	PERCENTAGE OF TOTAL EXPORTS AT PLACES NAMED.		
				Flour.	Wheat.	Corn.
Montreal.....	1883. 775,242	1883. 5,008,167	1883. 4,530,731	10.1	10.9	9.1
New Orleans.....	22,061	651,430	3,061,224	.3	1.4	6.1
Total.....	7,698,975	46,021,826	49,897,107			
During the year 1883 the canals carried through freight going east.....	.....	16,466,633	16,799,321	.....	35.7	33.6
New York.....	1884. 3,907,021	1884. 28,687,362	1884. 11,862,158	51.6	49.4	38.5
Boston.....	2,173,842	1,692,081	4,247,071	28.7	02.9	13.8
Philadelphia.....	203,460	5,775,658	1,610,392	02.6	09.9	05.2
Baltimore.....	444,249	16,524,524	5,651,605	05.9	28.4	18.3
Montreal.....	844,019	3,967,457	3,316,053	11.2	06.9	10.8
New Orleans.....	Not reported.	1,405,219	4,089,507	.....	02.5	13.4
Total.....	7,572,591	58,052,301	30,776,786			
During the year 1884 the canals carried through freight going east.....	213	24,322,200	5,638,357	.....	.....	.....

	1885.	1885.	1885.			
New York.....	3,763,029	16,286,800	26,259,328	45.7	54.9	43.8
Boston.....	1,972,326	1,062,293	3,647,244	23.9	3.5	6.1
Philadelphia.....	695,287	3,369,915	6,028,564	8.4	11.1	10.1
Baltimore.....	1,093,093	4,575,262	13,752,196	13.3	15.1	22.9
New Orleans.....	25,158	96,930	7,825,641	0.3	0.3	13.1
Montreal.....	679,426	4,221,283	2,378,827	8.4	15.1	4.0
Total.....	8,228,319	29,612,483	59,891,800	100.0	100.0	100.0
During the season of 1885 the canals carried through freight going east.....	296	16,379,100	10,883,500	.....	55.3	.....

Exports of flour, wheat and corn, from New York, Baltimore, Boston and Philadelphia, from January 1 to December 1, 1888.

	New York.	Boston.	Philadelphia.	Baltimore.
Flour, barrels ..	3,476,991	1,530,217	536,419	2,243,511
Corn meal, bbls.	107,589	87,716	970	1,278
Wheat, bushels..	12,224,374	1,210,666	930,769	4,083,408
Corn, bushels...	12,101,098	2,611,717	693,160	3,206,948
Oats, bushels ...	112,069	25,468	365	5,614
Rye, bushels....	6,237	.....	.....	.....
Barley, bushels.	48	.....	.....	.....
Peas, bushels ...	132,511	97,611	.....	.....
	24,576,337	3,945,462	1,624,294	7,295,970
Flour to bushels.	17,384,955	7,651,085	2,682,095	11,217,555
Meal to bushels.	537,945	438,580	4,850	6,390
Total exports.	42,499,237	12,035,127	4,311,239	18,519,915

By the above table it will be seen that the whole number of bushels of flour, corn meal, wheat, corn, oats, rye, barley and peas, which were exported from New York, Boston, Philadelphia and Baltimore, were as follows:

	Bushels.
New York.....	42,499,237
Boston	12,035,127
Philadelphia	4,311,239
Baltimore	18,519,915

The total amount of flour, wheat, corn, oats, rye, barley and peas, which was received in the city of New York, from the canal, from May 1 to December 1, 1888, was 32,482,350 bushels.

The following table shows the total amount (in bushels) of flour, meal, wheat, corn, oats, barley, rye, peas and malt, that was received in the city of New York, by all the routes, and the amount which each route carried and the per cent of the whole amount which was carried by each route:

RECEIPTS by all routes at New York, January 1 to December 1, 1888.

	Hudson.	Erie.	Pennsylvania.	Delaware. Lackawanna and Western.	West Shore and Buffalo.	Various.
Flour, barrels	1,571,675	1,186,881	845,791	459,084	635,311	707,292
Meal, barrels	4,736	22,321	104,390	990	436	7,336
Meal, sacks	36,420	94,880	223,308	4,995	3,247	29,994
Wheat, bushels	983,400	1,741,300	640,200	33,550	1,048,300	134,943
Corn, bushels	633,050	1,753,350	792,000	295,350	1,973,400	494,632
Oats, bushels	5,485,000	3,533,000	1,477,000	1,171,000	2,375,000	1,407,990
Barley, bushels	309,400	540,350	32,500	90,950	247,650	206,700
Rye, bushels	33,550	24,200	39,075	2,200	4,024	17,386
Peas, bushels	71,500	14,300	5,500	94,600	8,800	2,200
Malt, bushels	2,054,000	753,000	72,000	272,000	332,000	88,000
Total grain	9,569,900	8,359,500	3,058,275	1,959,650	8,989,174	2,351,851
Flour, bushels	7,072,538	5,340,965	3,806,059	2,065,878	2,858,899	3,182,814
Meal, bushels	91,784	279,044	864,176	13,950	8,238	89,332
Grand total	16,734,222	13,979,509	7,728,510	4,039,478	11,856,311	5,623,997
Per cent	17.41	14.55	8.04	4.21	12.34	5.85

Receipts by all routes at New York — (Concluded).

	Total rail.	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels.....	5,406,034	163,032	150	163,182	5,569,216
Meal, barrels.....	140,209	4,144	.....	4,144	144,353
Meal, sacks.....	392,844	15,656	.....	15,656	408,500
Wheat, bushels.....	4,581,693	878,711	13,719,400	14,598,111	19,179,804
Corn, bushels.....	5,941,782	439,337	14,455,000	14,894,337	20,836,119
Oats, bushels.....	18,448,990	21,142	3,443,300	3,464,442	21,913,432
Barley, bushels.....	1,427,550	752,182	778,800	1,530,982	2,958,532
Rye, bushels.....	120,435	17,074	31,600	48,674	169,109
Peas, bushels.....	196,900	.....	53,500	53,500	250,400
Malt, bushels.....	3,571,000	92,608	673,200	765,808	4,336,808
Total, grain.....	34,288,350	2,201,054	33,154,800	35,355,854	69,644,204
Flour, bushels.....	24,327,153	733,644	675	734,319	25,061,472
Meal, bushels.....	1,346,524	47,888	.....	47,888	1,394,412
Grand total.....	59,962,027	2,982,586	33,155,475	36,138,061	96,100,088
Per cent.....	62.40	3.10	34.50	37.60	100

The whole number of bushels of flour, meal, wheat, corn, oats, barley, rye, peas and malt delivered in the city of New York from May 1 to December 1, 1888, was 75,158,023, and was delivered by the following routes:

	Bushels.
Hudson River railroad	11,047,610
Erie railroad	10,998,052
Pennsylvania railroad	4,733,745
Delaware, Lackawana and Western railroad	2,570,026
West Shore and Buffalo	7,030,917
Various	3,819,613
River and coast	1,802,585
Canal	33,155,475
	<hr/>
	75,158,023
	<hr/>

The following table shows the receipt of grain at New York by routes, from May 1 to December 1, and the per cent of the whole amount carried by each route:

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RECEIPTS by all routes at New York, May 1 to December 1, 1888.

	Hudson.	Erie.	Pennsylvania.	Delaware, Lackawanna and Western.	West Shore and Buffalo.	Various.
Flour, barrels	943,459	905,938	520,895	316,577	274,215	495,285
Meal, barrels	1,751	16,766	64,607	445	150	6,398
Meal, sacks	30,020	73,858	140,920	3,450	1,250	17,128
Wheat, bushels	817,300	1,610,400	490,600	11,550	869,000	122,843
Corn, bushels	413,050	1,414,550	144,100	152,350	1,173,150	279,400
Oats, bushels	4,127,000	2,931,000	1,121,000	749,000	3,472,000	931,550
Barley, bushels	102,050	185,250	31,850	21,400	109,850	133,900
Rye, bushels	18,150	23,100	13,050	.....	1,100	11,090
Peas	43,450	8,250	3,850	65,450	2,750	2,200
Malt, bushels	1,214,000	534,000	45,000	137,000	166,000	50,000
Total grain	6,735,000	6,706,550	1,849,450	1,136,750	5,793,850	1,530,983
Flour, bushels	4,245,566	4,076,722	2,344,027	1,424,596	1,233,967	2,228,782
Meal, bushels	67,044	214,780	540,268	8,680	3,100	59,348
Grand total	11,047,610	10,998,052	4,733,745	2,570,026	7,030,917	3,819,613
Per cent	14.70	14.63	6.30	3.42	9.36	5.08

Receipts by all routes at New York, from May 1 to December 1, 1888—(Concluded).

	Total rail.	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels	3,456,369	119,596	150	119,746	3,576,115
Meal, barrels	90,117	2,278	.....	2,278	92,395
Meal, sacks	266,626	9,523	.....	9,523	276,149
Wheat, bushels	3,921,693	877,287	13,719,400	14,596,687	18,518,380
Corn, bushels	3,576,600	122,616	14,455,000	14,577,616	18,154,216
Oats, bushels	13,331,550	21,142	3,443,300	3,464,442	16,795,992
Barley, bushels	584,300	107,800	778,800	886,600	1,470,900
Rye, bushels	66,490	16,792	31,600	48,392	114,882
Peas, bushels	125,950	.....	53,500	53,500	179,450
Malt, bushels	2,146,000	90,608	673,200	753,808	2,909,808
Total grain	23,752,583	1,236,245	33,154,800	34,391,045	58,143,628
Flour, bushels	15,553,660	538,182	675	538,857	16,092,517
Meal, bushels	893,720	28,158	.....	28,158	921,878
Grand total	40,199,963	1,802,585	33,155,475	34,958,060	75,158,023
Per cent	53.49	2.40	44.11	46.51	100

RECEIPTS by all routes at New York, from May 1 to December 1, 1887.

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[ASSEMBLY,

	Hudson.	Erie.	Pennsylvania.	Delaware, Lackawanna and Western.	West Shore and Buffalo.	Various.
Flour, barrels	1,272,398	387,530	554,231	329,418	351,665	219,877
Meal, barrels	1,835	6,128	78,199	121	73	58
Meal, sacks	38,831	44,911	166,176	1,565	2,600	7,249
Wheat, bushels	2,090,000	4,182,750	1,074,700	103,400	1,207,250	277,460
Corn, bushels	516,450	960,300	162,800	17,600	628,650	176,550
Oats, bushels	4,505,000	2,940,300	1,200,000	801,000	2,570,000	1,555,000
Barley, bushels	65,000	143,000	5,750	83,400	150,250	40,950
Rye, bushels	20,350	9,900	67,332	.....	200	12,660
Peas, bushels	59,410	11,000	.....	50,050	9,350	1,650
Malt, bushels	1,497,700	481,000	56,000	164,000	276,000	19,000
Total grain	8,753,910	8,728,250	2,566,582	1,219,450	4,851,700	2,083,270
Flour, bushels	5,725,791	3,993,885	2,494,039	1,482,381	1,582,493	989,446
Meal, bushels	85,002	114,334	645,148	3,614	5,492	14,730
Grand total	14,564,703	12,836,469	5,705,769	2,705,445	6,439,685	3,087,446
Per cent	15.86	14.00	6.21	2.94	7.01	3.35

Receipts by all routes at New York, from May 1 to December 1, 1887 — (Concluded).

	Total rail.	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels.....	3,615,119	96,523	400	96,923	3,712,040
Meal, barrels.....	86,414	2,657	.....	2,657	89,071
Meal, sacks.....	261,332	2,504	.....	2,504	263,836
Wheat, bushels.....	8,935,560	53,174	28,457,000	23,510,174	37,445,734
Corn, bushels.....	2,462,350	34,170	13,007,400	13,041,570	15,503,920
Oats, bushels.....	13,571,300	1,534	1,731,600	1,733,134	15,304,434
Barley, bushels.....	488,350	104,614	1,732,300	1,836,914	2,325,264
Rye, bushels.....	110,442	98,833	47,600	146,433	256,875
Peas, bushels.....	131,460	1,100	14,100	15,200	146,660
Malt, bushels.....	2,503,700	56,722	698,100	754,822	3,258,522
Total grain.....	28,203,162	350,147	45,688,100	46,038,247	74,241,409
Flour, bushels.....	16,268,035	434,353	1,800	436,153	16,704,188
Meal, bushels.....	868,320	15,636	.....	15,636	883,956
Grand total.....	45,339,517	800,136	45,689,900	46,490,036	91,829,553
Per cent.....	49.37	0.87	49.76	50.63	100

The following statement shows the receipts by all routes at New York, of flour and grain, from January 1, 1887, to December 1, 1887, and the percentage of the total amount which was carried by each route during that time.

	Hudson.	Erie.	Pennsylvania.	Delaware, Lackawanna and Western.	West Shore and Buffalo.	Various.
Flour, barrels	1, 770, 040	1, 334, 490	770, 496	564, 579	640, 238	375, 216
Meal, barrels	3, 132	9, 924	108, 295	254	73	304
Meal, sacks	68, 101	69, 123	231, 683	3, 493	4, 775	14, 646
Wheat, bushels	3, 770, 800	5, 605, 600	1, 309, 550	464, 200	2, 808, 300	1, 238, 976
Corn, bushels	1, 976, 700	1, 778, 150	993, 850	176, 000	748, 000	624, 232
Oats, bushels	6, 303, 100	4, 337, 200	1, 944, 950	1, 086, 050	2, 908, 950	2, 445, 848
Barley, bushels	362, 275	432, 700	10, 775	263, 775	355, 300	410, 200
Rye, bushels	51, 150	16, 500	128, 932	3, 850	750	58, 660
Peas, bushels	110, 760	42, 350	30, 800	71, 500	13, 200	2, 200
Malt, bushels	2, 252, 000	728, 750	74, 150	249, 400	404, 900	69, 300
Total grain	14, 826, 785	12, 941, 250	4, 493, 007	2, 314, 775	7, 239, 400	4, 849, 416
Flour, bushels	7, 965, 180	6, 005, 205	3, 467, 222	2, 540, 606	2, 881, 071	1, 688, 472
Meal, bushels	148, 730	177, 942	896, 546	8, 002	9, 842	30, 508
Grand total	22, 940, 695	19, 124, 397	8, 856, 775	4, 863, 383	10, 130, 313	6, 568, 396
Per cent.	19.22	16.03	7.42	4.07	8.49	5.50

Receipts by all routes at New York, from January 1, 1887, to December 1, 1887 — (Concluded).

	Total rail.	River and coast.	Canal.	Total water.	Total rail and water.
Flour, barrels	5,455,059	118,128	400	118,528	5,573,587
Meal, barrels	121,982	3,601	.....	3,601	125,583
Meal, sacks	391,821	4,725	.....	4,725	396,546
Wheat, bushels	15,197,426	59,389	28,457,000	28,516,389	43,713,815
Corn, bushels	6,296,931	214,166	13,007,400	13,221,566	19,518,498
Oats, bushels	19,026,098	2,024	1,731,600	1,733,624	20,759,722
Barley, bushels	1,835,025	143,516	1,732,300	1,875,816	3,710,841
Rye, bushels	259,842	116,731	47,600	164,331	424,173
Peas, bushels	270,810	1,608	14,100	15,708	386,518
Malt, bushels	3,778,500	72,120	698,100	770,220	4,548,720
Total grain	46,664,633	609,554	45,688,100	46,297,654	72,962,287
Flour, bushels	24,547,756	531,575	1,800	533,376	25,081,132
Meal, bushels	1,271,570	23,854	.....	23,854	1,295,424
Grand total	72,483,959	1,164,983	45,689,900	46,854,884	119,338,843
Per cent	60.73	.98	38.29	39.27	100

NEW BOATS REGISTERED AND TONNAGE.

During the past year eighty-five new boats have been added to the registry, with a total tonnage of 18,753 tons, being an average of 220 tons each, the number of boats now registered being 5,302.

STATEMENT showing the various tonnage of the boats registered in each of the last forty-four years, and the progressive increase of their capacity.

TONNAGE.	Inventory of all boats to Jan'y, 1884.	NEW BOATS REGISTERED.									
		1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.
280.....
250.....	3
240.....	1
230.....
225.....
220.....	1
200.....	5
190.....
180.....
170.....	1	...	...
160.....
150.....	2	...	1	6
140.....
135.....
130.....	1	...	1	2	7
125.....	1	...	18
120.....	1	...	2	...	16
115.....	10
110.....	16
105.....
100.....	2	13	27	34	79

STATEMENT showing the various tonnage of the boats registered in the last forty-four years — (Continued).

TONNAGE.	NEW BOATS REGISTERED.									
	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.
95.....	....	1	1	6	....	4	6	23	63	180
90.....	1	4	6	27	10	4	25	72	99	164
85.....	....	1	1	45	21	13	16	11	22	22
80.....	9	13	100	560	143	78	38	28	26	33
75.....	33	60	186	553	158	75	17	22	10	15
70.....	124	107	123	162	59	20	20	18	9	6
65.....	94	54	26	44	13	2	4	1	4	3
60.....	71	33	9	30	25	7	3	2	2	2
55.....	15	4	1	13	8	....	....	....	....	....
50.....	14	5	3	4	2	2	4	1	6	3
45.....	1	2	1	3	4	....	....	1	....	....
40.....	....	....	3	4	1	....	3	1	....	....
35.....	1	1	....	3	....	....	....	1	....	....
30.....	11	1	....	3	6	....	....	1	....	....
25.....	3	....	4	3	....	4	....	....	....	....
20.....	....	3	3	2	....	2	....	....	....	....
15.....	1	....	....	1	1	....	....	....	....	....
10.....	....	1	2	3	1	....	....	....	2	....
5.....	....	4	....	....	....	....	1	....	....	....
2.....	....	3	....	....	....	....	....	....	....	....
2,126	378	297	477	1,466	457	215	152	213	271	590

Inventory of
all boats to
Jan'y, 1884.

STATEMENT showing the various tonnage of the boats registered in the last forty-four years — (Continued).

TONNAGE.	NEW BOATS REGISTERED.									
	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
280 .....	...	...	...	...	...	...	...	...	2	...
250	1	...	1	1	1	2	2	16	3	...
240 .....	...	1	2	...	...	...	...	7	1	...
230 .....	...	...	...	...	...	...	...	...	28	3
225 .....	...	...	...	...	...	...	...	...	113	2
220	1	...	...	...	...	...	3	55	4	69
200	3	4	...	3	3	4	33	176	310	254
190 .....	...	...	...	...	...	...	...	...	19	25
180 .....	...	...	4	...	7	12	60	51	6	70
170	1	...	...	...	15	7	17	9	16	8
160 .....	...	...	...	...	...	...	...	...	2	9
150	13	2	2	51	46	11	14	27	84	24
140 .....	...	...	4	15	5	1	2	19	12	14
135 .....	...	...	5	2	...	...	2	1	...	...
130	9	43	22	16	4	2	2	3	8	16
125	105	18	14	21	15	1	5	6	2	3
120	143	125	118	84	13	9	22	15	19	15
115	34	17	13	4	...	...	5	1	13	3
110	87	12	10	6	3	1	4	6	4	5
105 .....	...	...	1	2	...	2	...	...	...	...
100	83	28	28	8	25	14	55	69	100	61
95	69	40	38	18	15	5	13	20	24	14
90	95	58	69	43	16	36	42	42	54	102
85	20	16	3	16	5	8	35	30	3	8

STATEMENT showing the various tonnage of the boats registered in the last forty-four years — (Continued).

TONNAGE.	NEW BOATS REGISTERED.									
	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
80.....	44	28	6	15	22	25	49	37	4	18
75.....	32	43	17	14	14	21	19	...	4	7
70.....	10	23	4	3	7	16	4	7	1	10
65.....	1	2	...	1	3	4	3	2	...	...
60.....	2	4	...	3	18	8	2	6	1	6
55.....	...	...	...	...	...	10	...	...	...	...
50.....	1	3	1	...	7	1	2	2	2	5
45.....	1	...	...	...	1	3	1	...	1	6
40.....	1	...	1	1	3	...	1	1	...	...
35.....	...	...	...	...	...	...	1	...	...	...
30.....	...	...	...	1	...	...	...	...	2	9
25.....	1	1	...	...	3	...	...	1	4	...
20.....	...	1	1	...	...	...	1	1	1	4
15.....	2	1	1	...	1	1	...	...	...	...
	760	471	363	328	253	204	400	619	848	770

STATEMENT showing the various tonnage of the boats registered in the last forty-four years— (Continued).

TONNAGE.	NEW BOATS REGISTERED.										
	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
280.....	....	....	....	....	....	....	....	....	....	....	....
250.....	....	....	....	....	....	....	....	....	....	....	....
240.....	1	3	40	47	49	60	49	44	14	1	6
230.....	3	4	28	42	61	38	37	18	92	176	111
225.....	11	4	24	29	44	18	10	7	21	20	16
220.....	30	19	43	47	27	14	11	4	10	26	2
200.....	98	45	68	56	32	11	13	6	19	21	4
190.....	3	....	....	5	....	....	....	....	45	20	20
180.....	7	4	4	....	....	....	....	....	....	....	....
170.....	....	3	....	....	....	1	....	....	1	2	....
160.....	2	....	4	....	....	....	1	....	....	....	....
150.....	24	8	11	12	7	2	....	....	....	....	....
140.....	15	3	5	7	7	2	....	....	....	....	....
135.....	....	....	....	....	....	....	....	....	....	....	....
130.....	3	2	7	20	5	7	19	13	....	....	....
125.....	5	2	4	4	2	....	2	1	1	10	5
120.....	6	6	21	16	6	7	7	2	10	2	2
115.....	4	4	12	....	....	....	2	1	1	35	3
110.....	2	6	2	....	....	....	2	1	7	33	15
105.....	....	....	....	....	....	3	....	....	....	....	....
100.....	38	11	95	114	40	....	....	....	....	....	....
95.....	38	5	21	....	7	43	30	28	23	14	13
90.....	66	37	65	83	27	19	13	13	3	5	6

STATEMENT showing the various tonnage of the boats registered in the last forty-four years — (Continued).

TONNAGE.	NEW BOAT REGISTERED.										
	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
85.....	4	2	2	...	3	2	5	1	4	1	3
80.....	19	8	6	22	7	4	5	6	6	6	3
75.....	1	6	4	7	4	5	4	5	5	6	3
70.....	7	6	4	4	23	23	9	22	12	1	6
65.....	...	...	...	...	...	...	...	...	...	...	...
60.....	6	3	4	2	23	25	31	13	14	...	5
55.....	...	...	...	...	...	...	...	...	...	...	...
50.....	1	1	1	1	6	6	2	...	1	...	3
45.....	3	...	...	...	...	...	...	...	...	1	2
40.....	...	...	...	...	...	...	...	...	...	...	...
35.....	...	...	...	...	...	...	...	...	...	...	...
30.....	...	1	...	...	...	...	...	1	1	1	...
25.....	1	...	...	...	...	...	...	...	...	...	...
20.....	1	1	1	...	...	...	1	...	1	...	2
15.....	...	...	...	...	...	2	1	3	1	...	...
	399	198	484	520	387	298	269	194	326	433	249

STATEMENT showing the various tonnage of the boats registered in the last forty-four years — (Continued).

TONNAGE.	NEW BOATS REGISTERED.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1884.	1885.	1886.
280.....	...	...	...	...	...	1	...	...	...	...	...
250.....	5	2	...	15	19	63	70	12	24	14	34
240.....	35	18	14	116	151	223	109	9	4	2	9
230.....	4	3	...	5	13	23	24	...	...	...	...
225.....	1	1	1	2	1	10	9	1	...	...	1
220.....	3	...	1	3	1	15	5	2	...	...	...
200.....	8	2	1	8	8	17	13	5	...	...	...
190.....	...	...	...	...	...	...	1	1	...	...	...
180.....	...	...	...	2	2	...	1	...	...	...	...
170.....	...	...	...	...	1	...	...	...	...	...	...
160.....	...	3	1	...	1	...	...	...	...	...	...
150.....	...	...	1	...	2	6	10	2	...	...	...
140.....	1	...	...	3	...	1	3	1	1	...	3
135.....	...	...	...	...	...	...	1	...	...	...	...
130.....	1	...	...	2	4	4	...	1	...	...	...
125.....	4	1	1	...	6	19	1	2	...	1	...
120.....	2	1	1	4	4	8	10	1	...	...	...
115.....	...	1	1	...	3	2	4	3	...	...	...
110.....	6	10	6	14	15	...	16	1	1	...	...
105.....	...	...	...	30	51	31	2	...	...	2	...
100.....	5	11	31	7	16	4	31	35	14	5	4
95.....	9	9	1	...	...	...	29	4	9	7	...

Tons of merchandise going to other States by way of Buffalo, from 1860 to 1888, inclusive.

STATES, Etc.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
Pennsylvania	1,439	706	861	899	535	420	147	331
Ohio	10,003	5,159	7,340	9,726	6,106	8,093	5,785	5,678
Michigan	13,509	6,476	7,137	6,414	4,782	5,406	4,874	12,885
Indiana	2,967	1,470	793	1,869	1,144	2,151	1,638	2,987
Illinois	24,385	12,108	24,118	21,024	25,842	24,575	41,288	44,579
Wisconsin	13,517	6,920	9,705	20,562	9,856	11,407	11,359	13,116
Kentucky	111	38	351	879	130	206	19	323
Missouri	2,284	706	1,685	1,245	1,680	1,281	1,407	892
Tennessee	18	.....	.....	.....	.....	20	.....	.....
Alabama .....	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota	699	489	.....	.....	3,045	361	863	452
Iowa	1,355	834	850	1,371	3,991	1,992	808	783
Canada	842	332	105	135	227	3,263	188	9
	72,030	35,278	52,945	64,124	57,338	59,175	68,375	83,045

Tons of merchandise going to other States by way of Buffalo, from 1860 to 1888, inclusive — (Continued).

STATES, ETC.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Pennsylv'a	9	12	206	174	821	73	32	90	.....	354
Ohio.....	9,227	4,926	7,923	4,424	10,571	3,778	1,272	898	124	2,794
Michigan..	8,232	8,339	4,072	4,215	15,299	10,743	2,095	6,296	67	3,151
Indiana...	2,021	2,113	952	1,072	10,133	2,136	416	335	1	119
Illinois....	48,884	47,891	51,161	54,574	40,315	26,916	23,416	5,431	2,341	11,281
Wisconsin.	23,986	6,610	8,532	15,174	15,962	10,780	3,165	1,538	406	2,361
Kentucky..	1,493	.....	733	528	565	385	64	88	.....	.....
Missouri..	2,775	3,163	10,610	14,727	19,284	1,404	430	121	.....	.....
Tennessee.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alabama..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota.	1,313	13,157	5,487	21,313	10,649	482	381	144	4	.....
Iowa.....	1,428	4,552	6,510	6,377	4,460	518	673	674	20	266
Canada ...	191	.....	.....	.....	18,354	364	115	11,752	307	.....
	99,559	90,763	96,186	122,578	146,413	57,579	32,059	27,367	3,270	20,326

Tons of merchandise going to other States by way of Buffalo from 1860 to 1888, inclusive—(Concluded).

STATES, ETC.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Pennsylvania.	999	2,219	.....	.....	4,211	8,206	.....	.....	.....	4,724
Ohio.....	8,148	16,523	23,156	29,067	32,218	28,626	425	.....	.....	18,658
Michigan.....	3,699	3,730	17,684	13,485	4,596	5,993	4,055	.....	.....	15,629
Indiana.....	2,308	2,393	11,871	9,883	1,404	6,731	50	.....	.....	11,913
Illinois.....	41,684	80,358	72,484	156,403	78,998	76,230	3,450	63,805	55,665	18,483
Wisconsin...	10,799	12,567	46,968	35,870	6,907	13,864	47,467	37,790	23,595	12,567
Kentucky...	1,577	2,851	573	270	552	1,873	.....	.....	.....	.....
Missouri....	11,816	19,988	13,882	29,013	3,064	5,010	133	.....	.....	6,767
Tennessee...	.....	.....	.....	.....	21	.....	.....	.....	.....	.....
Alabama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota...	2,359	2,986	18,199	6,332	3,243	2,992	51,786	40,518	40,984	22,185
Iowa.....	2,308	3,818	17,382	15,500	2,165	2,399	2,638	.....	.....	8,280
Canada.....	.....	185	.....	.....	26,069	25,979	12,736	14,000	3,000	29
	85,697	142,618	222,199	295,823	163,448	178,903	201,740	156,113	123,244	119,235
<hr/>										
				1888.						1888.
Ohio.....	.....	.....	.....	6,212	.....	.....	.....	.....	.....	6,774
Michigan.....	.....	.....	.....	2,875	.....	.....	.....	.....	.....	2,544
Illinois.....	.....	.....	.....	6,033	.....	.....	.....	.....	.....	3,250
Wisconsin...	.....	.....	.....	2,915	.....	.....	.....	.....	.....	.....
Indiana.....	.....	.....	.....	2,512	.....	.....	.....	.....	.....	.....
						Total.....				33,015

STATEMENT of the tons of property moved on each and all the canals, comprising the tons of total movement.

YEARS.	Erie.	Champlain.	Oswego.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1837	667, 151	261, 659	161, 353	20, 274	20, 288	24, 258
1838	744, 848	266, 553	222, 697	23, 541	30, 256	30, 336
1839	845, 007	263, 552	221, 014	26, 300	36, 089	26, 823
1840	829, 960	245, 229	219, 627	32, 486	34, 217	24, 026
1841	906, 442	276, 418	135, 689	34, 634	63, 042	33, 030
1842	712, 310	230, 844	129, 498	31, 716	54, 866	18, 660
1843	819, 216	262, 212	240, 571	25, 998	66, 247	31, 856
1844	945, 944	269, 546	326, 607	31, 099	88, 231	32, 589
1845	1, 038, 700	266, 922	340, 481	46, 464	114, 740	39, 489
1846	1, 264, 408	280, 480	351, 511	61, 014	124, 768	35, 556
1847	1, 661, 575	313, 124	441, 096	58, 204	189, 165	36, 318
1848	1, 599, 965	293, 889	490, 147	46, 252	150, 691	34, 155
1849	1, 622, 444	321, 345	557, 637	40, 440	135, 867	36, 317
1850	1, 635, 089	460, 219	583, 346	42, 379	128, 263	38, 797
1851	1, 955, 265	513, 793	676, 321	37, 084	159, 563	29, 339
1852	2, 129, 334	531, 001	684, 191	47, 275	187, 577	35, 757
1853	2, 196, 308	608, 354	761, 276	58, 793	249, 980	53, 985
1854	2, 224, 008	602, 913	611, 533	72, 995	270, 978	25, 349
1855	2, 202, 463	537, 108	654, 399	76, 744	223, 271	25, 850
1856	2, 107, 678	611, 610	657, 381	131, 907	245, 621	28, 559
1857	1, 566, 624	547, 236	605, 218	120, 435	187, 201	16, 571
1858	1, 767, 004	608, 918	688, 960	75, 968	205, 168	16, 318
1859	1, 753, 954	751, 046	612, 390	80, 602	256, 323	17, 933

1860	2,253,533	681,157	1,080,076	98,678	226,051	14,723
1861	2,500,782	545,930	852,920	100,992	208,792	12,239
1862	3,204,277	647,318	1,063,413	125,659	243,628	19,632
1863	2,955,302	878,920	992,173	119,704	307,151	11,230
1864	2,535,792	846,790	765,097	185,161	280,834	6,316
1865	2,523,490	815,311	825,649	192,312	164,796	9,376
1866	2,896,027	1,001,493	990,809	368,233	226,510	12,189
1867	2,920,578	1,047,440	940,136	389,704	145,627	6,558
1868	3,346,986	1,120,585	958,444	515,295	165,875	4,451
1869	2,845,072	1,059,334	934,638	533,516	245,761	7,541
1870	3,083,132	1,143,719	917,728	527,728	206,535	15,825
1871	3,580,922	1,099,995	941,858	445,186	173,281	12,024
1872	3,562,560	1,449,528	832,490	386,977	217,263	7,145
1873	3,602,535	1,195,390	655,588	437,382	257,962	12,831
1874	3,097,122	1,268,292	665,408	378,825	205,602	9,286
1875	2,787,226	1,077,746	486,530	224,492	129,425	.....
1876	2,418,422	910,151	370,330	137,264	214,448	.....
1877	3,254,367	1,021,782	319,327	247,864	12,026	.....
1878	3,608,634	1,040,912	257,254	168,201	8,767	.....
1879	3,820,027	1,012,005	333,713	117,027	.....	.....
1880	4,608,651	1,200,503	427,863	125,331	.....	.....
1881	3,598,721	986,079	394,542	99,617	.....	.....
1882	3,694,364	1,097,343	445,295	123,488	.....	.....
1883	3,587,102	1,366,358	276,350	134,631	.....	.....
1884	3,389,555	1,118,073	265,541	119,990	.....	.....
1885	3,208,207	1,139,402	213,079	64,125	.....	.....
1886	3,808,642	1,119,663	186,484	64,995	.....	.....
1887	3,840,513	1,229,335	176,177	195,933	.....	.....
1888	3,321,516	1,198,305	134,078	201,237	.....	.....

STATEMENT of the tons of property moved on each and all canals, etc.—(Concluded).

YEARS.	Chenango.	Genesee Valley.	Black River.	Oneida Lake.	Baldwinsville.	Total.
1837.....	8,213	.....	.....	.....	.....	1,171,296
1838.....	14,778	.....	.....	.....	.....	1,333,011
1839.....	16,928	.....	.....	.....	.....	1,435,713
1840.....	16,848	13,653	.....	.....	.....	1,416,046
1841.....	23,356	26,892	.....	22,150	.....	1,521,661
1842.....	17,177	41,860	.....	.....	.....	1,236,931
1843.....	19,026	48,313	.....	26,445	.....	1,513,439
1844.....	31,472	65,077	.....	25,991	.....	1,816,586
1845.....	38,305	73,546	.....	28,808	.....	1,977,565
1846.....	41,112	87,614	.....	22,188	.....	2,268,662
1847.....	44,051	95,632	.....	30,642	.....	2,869,810
1848.....	35,207	98,467	.....	47,451	.....	2,796,230
1849.....	36,557	84,674	.....	59,451	.....	2,894,732
1850.....	41,892	89,804	.....	56,828	.....	3,076,617
1851.....	40,307	100,000	25,320	45,049	.....	3,582,733
1852.....	44,939	122,901	36,497	43,969	.....	3,863,441
1853.....	76,538	157,164	41,924	43,351	.....	4,247,853
1854.....	77,124	158,942	55,525	34,532	31,945	4,165,862
1855.....	89,390	102,321	51,347	27,116	32,608	4,022,617
1856.....	105,502	113,731	68,126	18,485	27,481	4,116,082
1857.....	96,722	114,576	69,135	19,343	.....	3,344,061
1858.....	72,526	118,303	62,352	19,675	.....	3,665,192
1859.....	89,691	124,263	75,946	19,536	.....	3,781,684
1860.....	83,035	123,602	70,687	18,672	.....	4,650,214

1861	91,661	94,329	69,930	30,060	.....	4,507,635
1862	79,442	129,974	85,442	.....	.....	5,598,785
1863	90,215	112,549	90,448	.....	.....	5,557,692
1864	89,021	71,411	72,519	.....	.....	4,852,941
1865	68,822	56,581	73,317	.....	.....	4,729,654
1866	107,472	86,579	85,908	.....	.....	5,795,220
1867	103,064	64,679	70,539	.....	.....	5,688,325
1868	112,455	138,364	79,770	.....	.....	6,442,225
1869	83,527	69,141	80,550	.....	.....	5,859,080
1870	102,820	79,733	96,329	.....	.....	6,173,769
1871	39,793	85,269	89,560	.....	.....	6,467,888
1872	26,519	96,112	94,776	.....	.....	6,673,370
1873	30,317	86,770	86,017	.....	.....	6,364,782
1874	33,059	69,393	77,601	.....	.....	5,804,588
1875	23,769	64,677	65,993	.....	.....	4,859,858
1876	6,227	47,360	67,927	.....	.....	4,172,129
1877	.....	37,311	63,286	.....	.....	4,955,963
1878	.....	18,569	68,983	.....	.....	5,171,320
1879	.....	.....	79,600	.....	.....	5,362,372
1880	.....	.....	75,308	.....	.....	6,457,656
1881	.....	.....	100,233	.....	.....	5,179,192
1882	.....	.....	106,933	.....	.....	5,467,423
1883	.....	.....	128,656	.....	.....	5,664,056
1884	.....	.....	116,359	.....	.....	5,009,488
1885	.....	.....	106,971	.....	.....	4,731,784
1886	.....	.....	114,198	.....	.....	5,293,982
1887	.....	.....	111,847	.....	.....	5,553,805
1888	.....	.....	118,213	.....	.....	4,942,948

Value of the total movement of articles on all the canals from 1837 to 1888, both years inclusive, was as follows:

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837.....	\$6,146,716	\$16,201,331	\$6,390,486	\$23,935,990	\$3,134,766	\$55,809,288
1838.....	6,338,063	19,390,714	5,915,856	31,594,692	2,507,234	65,746,559
1839.....	7,762,553	17,056,911	5,989,576	39,493,764	3,096,960	73,399,764
1840, Gen.Val. can'l opened.	4,609,035	18,644,481	4,719,054	35,636,943	2,694,379	66,303,892
1841.....	11,841,103	21,901,713	5,422,615	50,134,320	2,903,178	92,202,929
1842.....	5,957,219	16,987,843	4,435,289	30,042,153	2,594,104	60,016,608
1843.....	6,653,080	20,588,118	4,925,545	40,651,798	3,458,368	76,276,909
1844.....	7,422,737	23,379,643	6,151,806	49,224,099	4,742,867	90,921,152
1845.....	6,472,237	25,479,488	6,994,932	52,542,336	5,140,866	100,629,859
1846.....	6,422,409	35,820,586	7,015,311	62,004,488	4,349,315	115,612,109
1847.....	7,546,063	55,757,166	8,072,059	74,753,638	5,434,502	151,563,428
1848.....	7,219,350	42,850,086	7,433,957	76,945,463	5,637,301	140,086,157
1849.....	8,671,057	46,408,092	7,183,930	77,094,282	5,374,924	144,732,285
1850.....	15,117,661	46,152,958	7,933,108	81,135,199	6,059,003	156,397,929
1851.....	12,549,754	43,277,458	8,255,575	88,531,320	7,367,694	159,981,801
1852.....	11,526,436	49,437,555	6,294,120	122,624,170	6,721,236	196,603,517
1853.....	14,001,506	57,482,815	8,091,100	118,317,856	9,286,293	207,179,570
1854.....	14,384,785	51,980,864	9,796,420	123,167,863	10,954,380	210,284,312
1855.....	10,545,615	58,222,314	10,467,559	113,572,523	11,582,136	204,390,147
1856.....	10,211,383	51,030,453	10,308,419	135,691,816	11,084,991	218,327,062
1857.....	9,827,410	30,955,369	9,330,067	74,633,905	12,250,267	136,997,018
1858.....	8,963,443	50,142,318	9,352,955	61,236,319	8,873,809	138,568,844
1859.....	10,798,769	34,044,601	8,757,059	65,072,972	13,487,357	132,160,758
1860.....	10,654,710	55,838,977	8,113,177	84,252,425	11,989,909	170,849,198

1861	6,462,614	57,861,720	6,718,273	49,707,729	9,365,557	130,115,893
1862	11,305,954	84,239,370	12,314,651	83,640,903	11,733,453	203,234,331
1863	13,421,909	101,090,511	13,044,051	91,417,513	21,072,477	240,046,461
1864	22,589,060	116,051,564	22,582,718	80,391,550	32,785,747	274,400,639
1865	21,011,122	83,670,467	18,095,266	102,627,877	30,832,372	256,237,104
1866	28,754,821	86,610,934	18,389,992	100,169,211	37,038,718	270,963,676
1867	28,977,470	81,616,663	16,877,334	108,545,569	42,939,676	278,956,712
1868	24,039,591	76,383,656	17,298,574	131,786,764	55,793,344	305,301,920
1869	21,930,655	55,528,825	13,595,892	103,464,505	54,761,407	249,281,284
1870	22,266,184	49,231,912	10,777,897	94,852,914	54,707,269	231,836,176
1871	27,309,303	68,130,282	10,881,540	78,898,185	53,548,381	238,767,691
1872	35,599,734	49,541,259	7,659,547	93,997,415	34,115,366	220,913,321
1873	18,651,838	60,194,909	5,979,656	76,173,336	30,715,761	191,715,500
1874	17,840,356	64,344,898	7,094,531	64,477,540	42,916,997	196,674,322
1875	12,478,669	50,540,911	6,311,137	40,885,448	34,792,410	145,008,575
1876	11,132,966	32,439,857	3,375,119	31,069,375	35,073,062	113,090,379
1877	15,574,893	46,765,635	10,911,786	46,130,795	21,028,903	139,411,963
1878	12,703,074	52,264,813	17,834,755	70,433,563	29,021,323	182,254,528
1879	12,053,499	56,826,653	37,173,222	144,653,500	34,573,762	285,280,726
1880	14,351,622	68,994,218	14,236,227	109,870,264	40,392,459	247,844,790
1881	18,399,932	43,440,343	11,863,021	75,331,308	13,148,961	162,153,565
1882	20,285,512	42,766,687	4,673,440	61,769,417	18,423,851	147,918,907
1883	18,038,056	39,727,973	3,426,474	68,231,320	18,387,400	147,861,223
1884	27,588,279	37,335,779	3,125,433	78,864,806	15,182,754	162,097,069
1885	17,302,765	31,404,325	2,827,280	58,215,252	9,786,627	119,536,189
1886	16,471,406	41,191,562	3,310,422	103,749,354	15,339,102	180,061,846
1887	15,568,667	42,729,684	4,808,178	82,161,364	13,978,084	159,245,977
1888	14,899,643	33,546,141	3,207,881	56,913,813	13,957,257	122,524,735

STATEMENT of the total movement of flour, meal and grain on all the canals, from 1861 to 1888.

YEARS.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861.....	1,667,416	.....	2,176	33,171,900	25,024,643	6,105,313
1862.....	2,102,574	.....	18,416	37,579,967	27,225,643	6,550,187
1863.....	1,930,731	.....	44,704	26,577,166	22,287,036	16,040,937
1864.....	1,474,582	.....	51,305	19,932,067	11,086,536	15,122,937
1865.....	1,271,129	.....	24,018	14,433,566	20,689,500	11,973,939
1866.....	751,870	.....	17,972	10,989,800	28,904,143	12,138,250
1867.....	569,334	.....	12,808	13,630,300	17,930,500	10,476,000
1868.....	575,900	.....	14,861	14,425,567	18,437,100	11,927,250
1869.....	657,870	.....	12,666	22,351,133	9,159,643	5,769,312
1870.....	509,055	.....	12,250	21,950,800	6,893,893	7,371,312
1871.....	381,583	.....	6,611	23,951,633	24,002,035	8,118,187
1872.....	190,129	.....	6,046	13,463,433	32,241,179	5,809,938
1873.....	181,731	.....	9,342	26,768,800	22,760,571	4,376,437
1874.....	269,759	.....	8,314	25,738,766	18,542,964	3,713,000
1875.....	163,287	.....	3,000	24,809,766	10,072,536	3,919,813
1876.....	86,019	.....	232	13,879,200	13,044,786	3,259,188
1877.....	82,621	.....	3,120	14,934,766	25,837,786	4,127,812
1878.....	54,666	.....	5,666	28,151,866	26,249,750	5,314,313
1879.....	66,333	.....	8,130	31,648,866	22,185,000	1,447,750
1880.....	76,537	.....	12,620	32,201,733	41,307,821	1,305,812
1881.....	64,129	.....	13,370	14,827,733	16,993,679	1,895,063
1882.....	86,777	.....	17,370	21,407,166	8,988,821	1,386,250
1883.....	83,768	.....	1,777	19,124,666	18,677,785	3,225,438

1884	.....	67,138	.....	343	26,346,966	7,079,143	3,293,500
1885	.....	63,602	.....	703	18,864,066	12,856,500	514,625
1886	.....	83,296	.....	5,435	33,270,966	12,670,178	454,875
1887	.....	37,861	..	65	31,228,000	15,950,607	2,210,312
1888	.....	20,463	.....	2,629	16,373,366	17,846,464	4,445,562

STATEMENT of total movement of flour, meal and grain on all the canals, etc.— (Concluded).

YEARS.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861	2,444,083	976,000	347,233	.....	2,070,251
1862	2,764,916	967,750	375,433	280,182	2,332,928
1863	3,816,458	592,571	530,700	366,242	2,021,505
1864	3,232,292	670,168	550,000	565,294	1,437,598
1865	5,336,416	1,220,714	401,533	725,151	1,530,037
1866	7,867,041	1,751,928	536,667	298,212	1,680,169
1867	4,972,250	1,044,643	827,133	479,818	1,322,774
1868	3,698,083	873,357	391,667	257,029	1,350,090
1869	4,125,500	481,750	379,233	330,400	1,221,397
1870	5,132,958	697,143	226,123	698,686	1,189,267
1871	4,749,662	1,234,392	162,700	801,371	1,759,882
1872	5,002,543	477,036	146,600	1,578,914	1,586,249
1873	2,941,083	1,077,143	393,300	1,182,466	1,660,981
1874	4,110,584	293,393	200,566	453,200	1,500,490
1875	4,353,125	296,750	195,200	71,287	1,238,115
1876	4,020,584	712,464	174,200	1,510,629	991,197
1877	5,810,542	1,283,857	162,533	718,800	1,439,662
1878	3,730,583	2,307,607	167,100	1,031,000	1,846,749
1879	4,006,000	2,114,643	124,466	582,706	1,770,846
1880	4,426,958	940,714	149,369	820,824	2,304,215
1881	3,399,458	553,000	101,334	887,526	1,074,545
1882	4,027,083	1,549,000	206,834	846,824	1,087,953
1883	2,449,291	3,401,643	43,666	952,706	1,329,099

1884.....	2,708,666	2,552,214	185,735	707,235	1,198,346
1885.....	2,691,135	364,678	70,000	604,706	1,028,260
1886.....	2,619,916	108,750	151,366	901,941	1,446,972
1887.....	3,144,083	239,892	14,133	781,588	1,498,304
1888.....	873,208	438,143	64,000	940,176	1,116,733

STATEMENT of foreign exports of flour and grain from New York, from 1861 to 1888.

YEARS.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861.....	3,110,646	11,807	108,385	28,889,914	12,456,265	160,875
1862.....	2,961,518	8,397	132,606	25,564,755	12,020,848	210,669
1863.....	2,527,338	5,461	140,561	15,424,889	7,533,431	126,566
1864.....	1,918,393	2,840	105,142	12,193,433	846,831	42,135
1865.....	1,402,144	2,673	127,600	2,527,626	2,549,670	94,567
1866.....	900,084	7,552	149,773	522,669	11,079,394	1,190,583
1867.....	871,089	11,754	151,669	4,468,774	8,147,813	144,665
1868.....	1,003,968	7,459	191,011	5,762,037	5,989,225	94,707
1869.....	1,584,211	5,283	137,627	18,240,586	1,637,586	49,393
1870.....	1,950,234	.....	.....	18,446,035	487,792	28,986
1871.....	1,660,400	4,200	123,500	21,968,600	13,046,600	47,300
1872.....	1,216,082	6,399	194,040	13,144,400	25,292,200	31,739
1873.....	1,655,331	8,249	176,756	27,801,800	15,587,500	49,700
1874.....	2,177,608	8,473	168,603	34,791,249	19,000,995	122,528
1875.....	1,954,100	5,700	173,400	26,192,700	12,938,700	138,800
1876.....	1,887,441	5,778	172,042	24,144,033	16,610,232	620,536
1877.....	1,537,106	7,999	220,939	21,355,774	25,373,942	257,634
1878.....	2,630,437	4,375	202,788	55,019,389	27,440,771	3,658,905
1879.....	3,684,366	6,049	150,178	61,538,861	35,319,789	521,406
1880.....	4,215,415	5,204	203,716	61,908,029	49,875,430	427,959
1881.....	4,440,114	3,264	196,985	41,798,182	31,731,995	431,426
1882.....	4,623,956	.....	112,316	37,620,103	9,012,373	170,586

1883	4,330,146	.....	.....	20,049,200	22,222,754	162,665
1884	3,907,021	.....	530	28,687,362	11,862,158	2,456,219
1885	3,763,029	3,863	152,488	16,286,800	26,259,228	6,198,302
1886 not reported .....	.....	.....	.....	.....	.....	.....
1887, to December first, only ..	3,731,523	.....	105,735	40,893,437	11,920,425	142,938
1888, to December first, only ..	3,476,991	.....	107,589	12,224,374	12,101,098	112,069

STATEMENT of foreign exports of flour and grain, etc. — (Concluded).

YEARS.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861.....	3,927	1,000,405	139,284	.....	1,599,261
1862.....	42,061	1,104,549	113,819	.....	1,477,321
1863.....	52,439	416,369	110,911	.....	980,675
1864.....	150	588	186,154	.....	614,642
1865.....	.....	198,348	88,899	.....	322,454
1866.....	1,329,842	248,646	282,992	.....	506,520
1867.....	886,893	473,260	680,763	.....	531,204
1868.....	90	152,993	189,226	.....	481,902
1869.....	.....	142,542	123,156	.....	788,075
1870.....	.....	92,431	151,102	.....	785,249
1871.....	98,700	525,800	90,900	.....	1,238,053
1872.....	22,066	668,030	156,609	.....	1,378,412
1873.....	19,400	1,069,100	143,500	.....	1,504,771
1874.....	3,560	641,661	463,193	.....	1,863,297
1875.....	1,500	206,900	364,900	.....	1,405,544
1876.....	88,097	1,336,283	716,428	.....	1,483,402
1877.....	2,412,509	2,049,796	487,031	.....	1,675,902
1878.....	1,518,922	4,048,841	476,184	.....	2,949,042
1879.....	147,867	3,941,638	393,153	.....	3,383,953
1880.....	254,833	2,181,183	651,669	.....	3,825,168
1881.....	15,477	1,068,928	218,370	.....	2,687,356
1882.....	6,616	1,980,586	572,567	.....	1,967,989

1883	8,939	4,467,853	.....	.....	1,819,284
1884	76,343	4,846,088	.....	.....	1,413,686
1885	408	493,319	.....	.....	1,759,840
1886, not reported .....	.....	.....	.....	.....	.....
1887, to December first, only	46,189	356,847	.....	.....	2,193,962
1888, to December first, only	48	6,237	.....	.....	1,098,641

STATEMENT showing the number of lockages for year 1888.

	Port Edward lock.	Cayuga and Seneca.	Montezuma, Cayuga and Seneca.	Cayuga and Seneca, Waterloo.	Cazhdenoy, O. R. im- provement.	Mud lock, Cayuga and Seneca.	Oswego, lock No. 13.	Oswego, lock No. 1.	Black Rock.	Black River, lock No. 1.	Lockport locks.	Tonawanda lock, Erie.
May	1,106	189	194	171	57	92	195	437	1,472	222	1,918	816
June	1,563	291	317	239	61	127	214	667	1,629	488	2,285	1,255
July	1,340	318	344	312	52	173	253	717	1,088	401	1,432	1,271
August	1,365	340	332	303	103	118	239	680	950	335	2,837	1,345
September	1,432	330	318	121	92	170	252	678	784	355	3,094	1,109
October	1,583	249	282	134	66	162	316	590	1,718	328	2,722	1,672
November	1,313	295	335	115	42	155	288	572	1,892	430	1,733	1,422
December	10	40	70	40	6	20	27	40	46	80	76	50

Statement showing the number of lockages — (Continued).

	Lock No. 66. Erie.	Lock No. 50. Erie.	Lock No. 49. Erie.	Lock No. 45. Erie.	Lock No. 23. Erie.	Sloop lock, Champlain.	Champlain Cohoes.	Lower side Troy. West	Upper side Troy. West	Lock No. 3. Erie.	Lock No. 2. Erie.	Lock No. 1. Erie.
May	1,664	1,813	1,975	1,686	1,505	172	648	211	1,158	1,452	813	717
June	2,033	2,207	2,462	2,728	2,418	399	1,263	298	1,968	2,470	1,473	935
July	1,065	1,269	1,446	1,610	2,399	460	1,152	228	1,527	1,365	1,875	641
August	2,428	2,836	2,960	2,923	2,671	380	1,216	261	2,159	1,780	1,384	855
September ..	2,797	2,928	3,068	3,148	2,781	402	830	291	2,186	2,948	1,564	1,168
October	2,411	2,872	2,750	3,069	2,920	429	960	262	2,115	2,700	1,621	1,209
November ...	1,555	3,406	3,106	4,514	2,872	489	1,222	248	1,585	2,993	999	973
December ...	15	35	40	22	50	16	108	10	122	250	37	20

STATEMENT of the number of clearances issued at each office on all the canals from 1833 to 1888, inclusive.

YEARS.	ERIE CANAL.									
	New York.	Albany.	West Troy.	Schenec- tady.	Fulton- ville.	Little Falls.	Utica.	Rome,	Syracuse.	Jordan.
1833	.....	8,932	6,698	2,296	.....	749	2,832	1,488	2,305	.....
1834	.....	9,283	6,942	3,203	.....	860	3,211	1,890	3,048	.....
1835	.....	10,967	7,378	3,868	.....	813	3,005	3,007	2,542	.....
1836	.....	10,235	6,801	3,358	1,142	788	3,403	2,087	2,544	.....
1837	.....	9,147	6,394	2,000	1,174	768	3,467	1,908	2,892	.....
1838	.....	9,530	6,530	2,567	977	1,015	3,924	1,804	3,206	.....
1839	.....	8,331	7,607	4,431	1,027	906	3,322	1,750	3,490	.....
1840	.....	8,860	6,868	4,678	954	999	2,780	1,688	3,510	.....
1841	.....	9,620	7,170	2,560	904	1,070	3,155	1,749	4,161	.....
1842	.....	9,293	7,143	1,235	882	636	3,316	1,423	3,614	.....
1843	.....	8,600	7,813	1,244	1,025	612	3,564	1,452	3,922	.....
1844	.....	10,345	9,048	1,073	775	481	3,465	1,497	4,735	.....
1845	.....	10,240	9,811	1,068	978	542	3,838	1,950	4,447	.....
1846	989	10,170	10,308	1,149	912	700	3,889	1,959	4,409	.....
1847	1,560	12,637	11,630	1,120	993	683	4,762	2,254	5,710	.....
1848	1,141	10,501	11,008	1,194	834	761	4,817	2,332	5,217	.....
1849	1,502	10,920	10,840	1,170	738	568	3,325	1,941	3,229	.....
1850	2,175	11,694	11,776	1,006	868	585	4,202	2,473	2,935	.....
1851	2,634	12,408	11,515	851	696	506	5,013	2,829	2,733	.....
1852	2,649	12,687	12,247	976	849	648	3,468	3,645	2,338	.....
1853	2,820	13,058	11,988	849	541	534	3,208	5,795	2,554	.....

1854	3,219	11,136	9,958	862	493	603	3,975	3,967	4,006	872
1855	2,377	8,676	9,501	881	552	554	3,958	4,196	3,344	588
1856	2,605	7,713	11,996	696	527	503	3,566	2,818	3,993	783
1857	1,724	6,128	8,017	576	444	507	3,441	3,213	4,273	611
1858	1,603	6,859	8,097	435	398	461	3,164	2,923	3,945	617
1859	1,361	6,184	7,349	579	479	453	3,167	3,194	3,808	547
1860	2,439	7,524	10,344	541	433	463	3,225	2,883	4,017	.....
1861	2,695	6,710	9,358	607	637	534	3,171	2,761	4,728	.....
1862	1,311	8,301	11,233	557	518	466	3,148	2,873	5,044	.....
1863	1,376	7,242	11,065	509	448	448	3,272	2,981	4,054	.....
1864	2,279	6,011	8,649	415	343	345	2,913	2,444	3,500	.....
1865	2,787	5,377	7,417	577	316	367	3,054	2,479	3,406	.....
1866	3,079	6,392	7,829	644	305	376	3,436	2,957	3,365	.....
1867	2,765	6,176	8,578	556	341	362	3,055	2,390	3,712	.....
1868	3,052	6,000	7,649	672	384	342	3,003	2,524	4,024	.....
1869	2,693	5,685	7,001	676	373	366	3,719	2,701	4,224	.....
1870	2,376	5,851	8,331	912	474	370	3,722	2,728	4,459	.....
1871	2,473	6,196	7,474	885	419	328	2,408	2,746	4,753	.....
1872	4,174	6,111	8,080	985	343	314	2,307	2,551	4,234	.....
1873	3,541	5,165	8,098	1,068	393	300	1,977	1,198	5,440	.....
1874	2,797	5,228	7,378	857	381	347	2,334	1,865	3,860	.....
1875	2,735	3,918	6,425	577	461	272	1,664	1,499	3,430	.....
1876	2,319	3,852	6,805	649	448	320	1,202	1,478	3,289	.....
1877	4,530	4,361	6,893	.....	.....	.....	1,306	1,361	4,016	.....
1878	4,921	5,321	8,182	.....	.....	.....	1,037	1,393	2,975	.....
1879	5,777	4,620	7,128	.....	.....	.....	1,020	1,449	3,120	.....
1880	6,733	5,478	8,938	.....	.....	.....	1,190	1,545	3,644	.....
1881	.....	5,515	9,389	.....	.....	.....	2,312	.....	3,657	.....
1882	.....	6,194	10,033	.....	.....	.....	2,397	.....	3,798	.....

STATEMENT of the number of clearances issued at each office on all the canals, etc. — (Continued).

YEARS.	ERIE CANAL.								
	Montezuma.	Lyons.	Palmyra.	Rochester.	Brockport.	Albion.	Medina.	Lockport.	Tonaw'nda.
1833.....	2,721	560	638	3,270	841	588	.....	782	.....
1834.....	4,660	750	810	4,479	1,018	579	.....	924	.....
1835.....	2,340	621	564	4,347	865	586	.....	1,230	.....
1836.....	5,441	479	602	4,880	700	437	.....	1,060	.....
1837.....	4,682	852	597	4,902	598	597	.....	719	.....
1838.....	4,732	615	604	4,379	459	414	.....	616	.....
1839.....	4,964	623	681	4,401	546	519	.....	872	.....
1840.....	4,988	779	1,169	5,940	625	618	.....	687	.....
1841.....	5,336	621	762	6,080	581	750	.....	1,423	.....
1842.....	3,927	536	877	6,064	702	876	.....	1,113	.....
1843.....	4,034	417	632	5,893	611	744	.....	1,162	.....
1844.....	4,350	237	429	5,819	479	481	.....	1,002	.....
1845.....	5,036	373	605	6,320	500	545	.....	1,188	.....
1846.....	5,179	502	654	7,524	554	646	.....	1,452	.....
1847.....	5,720	529	731	8,630	600	731	.....	1,545	.....
1848.....	6,111	715	748	7,800	1,076	661	.....	2,001	.....
1849.....	4,234	501	683	6,907	3,167	697	.....	1,741	.....
1850.....	4,049	444	723	5,642	1,228	748	.....	2,060	1,331
1851.....	3,994	561	729	6,286	874	696	715	1,612	1,979
1852.....	3,941	502	677	5,476	934	458	728	1,379	2,254
1853.....	4,183	426	556	5,054	846	283	802	1,283	1,951
1854.....	5,937	496	432	4,710	466	446	681	1,029	1,607
1855.....	5,359	550	355	3,861	749	551	1,382	1,103	1,858

STATEMENT of the number of clearances issued at each office on all the canals, etc. — (Continued).

YEARS.	ERIE CANAL.								Tonawanda
	Montezuma.	Lyons.	Palmyra.	Rochester.	Brockport.	Albion.	Medina.	Lockport.	
1856.	4,756	379	464	3,785	588	270	866	889	1,486
1857.	4,274	375	370	3,033	413	265	840	861	1,356
1858.	3,120	377	361	3,506	383	295	662	878	1,018
1859.	3,455	471	415	3,164	419	284	598	819	857
1860.	3,787	415	432	3,680	428	444	512	1,030	1,126
1861.	3,792	454	362	3,519	386	353	390	998	899
1862.	4,441	.....	534	3,954	197	400	.....	1,030	997
1863.	4,735	.....	566	4,245	529	462	.....	1,304	1,074
1864.	4,422	.....	433	2,716	383	272	.....	1,233	1,084
1865.	4,316	.....	400	2,225	329	310	.....	966	854
1866.	5,209	.....	423	2,584	247	285	.....	977	863
1867.	4,572	.....	450	2,199	375	339	.....	932	896
1868.	5,989	.....	462	2,769	346	308	.....	943	895
1869.	5,842	.....	513	1,857	301	354	441	732	1,025
1870.	6,458	.....	567	1,857	334	317	545	746	1,071
1871.	5,808	.....	550	1,917	365	347	652	789	1,054
1872.	6,640	.....	472	1,880	292	264	422	623	1,065
1873.	7,486	.....	625	2,449	349	351	588	897	1,485
1874.	5,924	.....	627	1,674	371	357	577	936	1,838
1875.	4,792	.....	496	1,340	344	369	416	652	1,559
1876.	4,342	.....	423	1,426	377	335	373	511	1,932
1877.	2,832	.....	.....	1,480	.....	.....	.....	.....	2,375
1878.	2,829	.....	.....	1,143	.....	.....	.....	.....	2,358

1879	2,239	.....	.....	.....	.....	.....	.....	.....	2,758
1880	2,447	.....	.....	.....	.....	.....	.....	.....	2,921
1881	.....	.....	.....	.....	.....	.....	.....	.....	3,422
1882	.....	.....	.....	.....	.....	.....	.....	.....	3,998
1883	.....	.....	.....	.....	.....	.....	.....	.....	3,300
1884	.....	.....	.....	.....	.....	.....	.....	.....	4,065
1885	.....	.....	.....	.....	.....	.....	.....	.....	3,632
1886	.....	.....	.....	.....	.....	.....	.....	.....	2,009
1887	.....	.....	.....	.....	.....	.....	.....	.....	3,652
1888	.....	.....	.....	.....	.....	.....	.....	.....	3,200

STATEMENT of the number of clearances issued at each office on all the canals, etc.— (Continued).

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[ASSEMBLY,

YEARS.	ERIE.			CHAMPLAIN.					
	Black Rock.	Buffalo.	Total.	Waterford and Sloop lock.	Schuyler-ville.	Fort Edward.	Glens Falls.	Whitehall.	Total.
1833.	.....	2,774	37,571	2,616	1,349	.....	.....	2,869	6,834
1834.	.....	4,008	45,662	3,484	1,498	.....	.....	3,245	8,228
1835.	.....	5,173	49,308	3,564	1,606	.....	.....	3,957	8,127
1836.	.....	5,816	48,773	2,880	1,580	.....	.....	3,867	8,325
1837.	.....	4,755	45,051	1,771	1,414	.....	.....	3,034	6,319
1838.	.....	5,970	46,342	1,462	1,411	.....	.....	3,290	6,163
1839.	979	5,013	49,392	1,538	1,493	.....	.....	3,356	6,387
1840.	956	4,851	50,959	952	1,285	.....	.....	3,802	6,039
1841.	1,459	5,682	53,193	1,416	1,653	.....	.....	3,534	6,603
1842.	1,149	5,174	47,959	706	1,434	.....	.....	3,275	4,709
1843.	1,222	5,994	48,942	820	1,242	.....	.....	3,061	4,303
1844.	2,493	6,900	51,609	939	1,401	.....	.....	3,509	4,911
1845.	1,377	6,375	55,190	1,045	1,605	.....	.....	3,523	5,128
1846.	1,535	8,212	60,743	1,415	1,675	.....	.....	3,515	6,605
1847.	1,831	11,136	72,801	1,100	1,759	.....	.....	4,078	6,937
1848.	1,145	9,407	66,462	1,295	1,540	.....	.....	3,619	6,454
1849.	1,504	9,132	60,769	866	775	.....	866	3,849	5,996
1850.	937	9,805	64,732	814	702	.....	1,013	4,429	6,958
1851.	999	10,380	68,120	807	908	.....	1,101	3,950	6,766
1852.	1,243	9,662	66,760	1,205	1,089	.....	2,273	4,146	7,714
1853.	1,517	9,248	67,497	1,644	1,108	.....	1,612	5,501	9,861
1854.	1,047	9,833	65,875	1,176	1,123	.....	1,515	3,967	7,785

1855.	1,134	9,874	61,405	1,122	1,264	.....	1,210	3,825	7,421
1856.	1,143	7,982	57,828	860	1,131	.....	1,585	4,049	7,625
1857.	.....	6,455	47,176	1,929	1,118	.....	1,314	3,393	7,754
1858.	.....	6,306	45,408	2,813	.....	2,543	.....	3,451	8,807
1859.	.....	4,839	42,442	3,160	.....	2,691	.....	4,041	9,892
1860.	.....	7,541	51,264	3,658	.....	2,576	.....	4,061	10,295
1861.	.....	9,584	51,938	2,796	.....	2,487	.....	2,539	7,822
1862.	.....	11,185	56,189	3,704	.....	2,341	.....	3,573	9,618
1863.	.....	9,556	53,861	3,643	.....	2,864	.....	4,361	10,868
1864.	.....	7,943	45,385	3,473	.....	2,760	.....	4,099	10,332
1865.	.....	6,944	42,124	2,668	.....	2,632	.....	4,016	9,336
1866.	.....	8,519	47,490	3,600	.....	2,791	.....	4,979	11,370
1867.	.....	7,664	45,362	5,184	.....	2,784	.....	5,179	13,147
1868.	.....	7,761	47,123	3,916	.....	3,228	.....	4,812	11,956
1869.	.....	6,725	45,228	4,564	.....	2,632	.....	4,671	11,867
1870.	.....	6,835	47,953	3,718	.....	2,380	.....	5,356	11,454
1871.	.....	8,795	48,959	4,651	.....	2,713	.....	5,015	12,379
1872.	.....	8,659	49,416	4,528	.....	3,040	.....	5,870	13,438
1873.	.....	9,063	51,473	3,681	.....	2,204	.....	4,929	10,814
1874.	.....	7,643	44,994	3,591	.....	2,494	.....	3,967	10,052
1875.	.....	6,365	37,284	3,261	.....	2,116	.....	3,877	9,254
1876.	.....	4,850	34,931	2,464	.....	1,807	.....	3,283	7,554
1877.	.....	6,938	36,092	2,002	.....	2,010	.....	3,535	7,547
1878.	.....	9,047	39,206	2,248	.....	2,349	.....	3,390	7,987
1879.	.....	8,708	37,677	2,244	.....	1,701	.....	3,856	7,801
1880.	.....	10,623	44,739	2,462	.....	1,995	.....	4,868	9,325
1881.	.....	6,317	32,091	3,237	.....	.....	.....	3,858	7,095
1882.	.....	6,613	34,353	3,713	.....	.....	.....	3,949	7,662
1883.	.....	6,801	.....	3,851	.....	.....	.....	3,685	.....

STATEMENT of the number of clearances issued at each office on all the canals, etc. — (Continued).

YEARS.	ERIE.			CHAMPLAIN.					
	Black Rock	Buffalo.	Total.	Waterford and Sloop lock.	Schuyler- ville.	Fort Edward.	Glens Falls.	Whitehall.	Total.
1884.	6,412	29,599	3,474	.....	.....	.....	2,754	6,228
1885.	5,670	27,626	3,473	.....	.....	.....	2,722	6,195
1886.	7,414	31,245	3,060	.....	.....	.....	3,114	6,174
1887.	7,925	36,113	3,001	.....	.....	.....	3,538	6,539
1888.	5,958	27,693	2,760	.....	.....	.....	2,862	5,622

STATEMENT of the number of clearances issued at each office on all the canals, etc. — (Continued).

YEARS.	OSWEGO.				CAYUGA AND SENECA.			
	Salina.	Phoenix.	Oswego.	Total.	Seneca Falls.	Geneva.	Ithaca.	Total.
1833	2,825	.....	914	3,739	.....	1,086	.....	.....
1834	5,230	.....	1,637	6,867	.....	1,894	.....	.....
1835	5,488	.....	2,275	7,763	.....	1,692	.....	.....
1836	4,842	.....	2,028	6,870	.....	1,730	.....	.....
1837	4,878	.....	1,773	6,651	.....	1,385	.....	.....
1838	5,782	.....	2,082	7,864	.....	1,361	.....	.....
1839	6,071	.....	2,385	8,456	.....	1,213	.....	.....
1840	5,492	.....	1,980	7,472	.....	1,223	.....	.....
1841	6,286	.....	2,839	9,125	.....	1,421	.....	.....
1842	4,530	.....	2,343	6,877	.....	1,397	.....	.....
1843	5,544	.....	2,407	7,951	.....	1,068	.....	.....
1844	6,841	.....	3,363	10,204	.....	1,249	.....	.....
1845	6,877	.....	3,419	10,296	.....	1,449	.....	.....
1846	9,169	.....	3,898	13,067	.....	1,881	.....	.....
1847	8,172	.....	4,666	12,838	.....	1,814	.....	.....
1848	8,299	.....	4,177	12,476	.....	1,632	.....	.....
1849	3,933	.....	3,928	7,861	.....	269	.....	.....
1850	3,773	.....	3,978	7,751	.....	289	.....	.....
1851	3,298	.....	4,773	8,071	.....	1,036	.....	.....
1852	3,050	.....	5,794	8,844	.....	954	.....	.....
1853	3,298	.....	5,831	9,129	.....	1,016	.....	.....
1854	5,943	2,372	5,001	13,316	1,002	855	.....	1,857

STATEMENT of the number of clearances issued at each office on all the canals, etc.— (Continued).

YEARS.	OSWEGO.				CAYUGA AND SENECA.			
	Salina.	Phoenix.	Oswego.	Total.	Seneca Falls.	Geneva.	Ithaca.	Total.
1855	5,463	2,293	5,092	12,848	1,120	851	.....	1,971
1856	5,857	2,137	6,833	14,827	845	562	1,032	2,439
1857	4,390	1,414	4,329	10,133	545	640	912	2,097
1858	6,533	1,888	5,117	13,538	594	770	376	1,740
1859	5,667	1,371	3,988	11,026	543	834	341	1,708
1860	6,050	1,985	6,263	14,298	878	1,091	.....	1,969
1861	5,720	1,470	5,306	12,496	634	1,017	.....	1,651
1862	6,542	1,576	5,483	13,601	.....	1,508	.....	1,508
1863	6,020	1,258	4,720	11,998	.....	1,192	.....	1,192
1864	4,528	959	3,767	9,254	.....	1,533	.....	1,533
1865	4,510	1,011	3,798	9,319	.....	2,071	.....	2,071
1866	5,136	883	4,273	10,992	.....	2,464	.....	2,464
1867	4,354	789	4,021	9,164	.....	2,385	.....	2,385
1868	4,415	813	4,129	9,357	.....	3,414	.....	3,414
1869	3,832	620	4,012	8,464	.....	3,435	.....	3,435
1870	3,522	676	3,955	8,153	.....	3,217	.....	3,217
1871	3,395	692	3,907	7,994	.....	2,786	.....	2,786
1872	3,710	529	3,303	7,542	.....	2,572	.....	2,572
1873	3,236	520	2,929	6,685	.....	2,648	.....	2,648
1874	2,980	564	2,877	6,421	.....	2,136	.....	2,136
1875	2,007	452	2,035	4,494	.....	1,392	.....	1,392
1876	2,181	.....	1,717	3,898	.....	853	.....	853
1877	.....	.....	1,902	1,902	.....	1,700	.....	1,700

1878	1878	1,516	1,516	1,091	1,091	1,091
1879	1879	1,803	1,803	751	751	751
1880	1880	2,241	2,241	817	817	817
1881	1881	2,075	2,075	717	717	717
1882	1882	2,200	2,200	745	745	745
1883	1883	1,809	1,809	797	797	797
1884	1884	1,265	1,265	748	748	748
1885	1885	1,255	1,255	725	725	725
1886	1886	1,281	1,281	680	680	680
1887	1887	916	916	978	978	978
1888	1888	815	815	947	947	947

STATEMENT of the number of clearances issued at each office on all the canals, etc.—(Continued).

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[ASSEMBLY,

YEARS.	CHEMUNG.				CROOKED LAKE.				CHENANGO.			
	Havana.	Watkins.	Horse-heads.	Corning.	Total.	Dresden.	Penn Yan.	Total.	Hamilton.	Oxford.	Bingham-ton.	Total.
1833	82	.....	170	.....	1,253	153	.....	153	.....	.....	.....	.....
1834	662	.....	595	.....	1,247	406	490	896	.....	.....	.....	.....
1835	911	.....	851	.....	1,892	424	651	1,075	.....	.....	.....	.....
1836	1,000	.....	951	.....	1,951	512	667	1,779	.....	.....	.....	.....
1837	967	.....	737	.....	1,704	448	550	998	183	167	162	517
1838	879	.....	741	.....	1,620	437	521	958	399	304	366	1,069
1839	895	.....	729	.....	1,624	403	527	930	303	369	208	880
1840	798	.....	755	.....	1,553	111	403	814	228	298	237	763
1841	1,153	.....	1,442	.....	3,595	414	476	890	316	422	301	1,039
1842	1,013	.....	1,348	.....	3,361	413	318	731	252	358	205	815
1843	1,119	.....	1,350	.....	3,468	448	516	964	344	343	281	968
1844	1,371	.....	1,679	.....	3,050	447	529	976	262	509	357	1,128
1845	1,534	.....	1,134	.....	3,696	624	571	1,195	258	491	440	1,189
1846	1,515	.....	1,314	1,028	3,699	778	500	1,278	263	430	514	1,207
1847	1,941	.....	1,339	870	4,440	750	510	1,300	425	502	550	1,447
1848	1,884	.....	1,457	1,152	4,569	555	589	1,184	546	493	506	1,545
1849	1,714	.....	1,024	1,228	3,843	559	466	1,025	335	335	319	989
1850	1,714	.....	914	1,105	3,839	560	482	1,042	348	512	435	1,295
1851	1,702	.....	890	1,211	3,828	505	411	916	274	322	311	907
1852	1,814	.....	946	1,235	3,999	418	409	827	488	462	623	1,603
1853	2,224	.....	1,174	1,621	5,019	458	458	916	588	372	802	1,762
1854	2,772	.....	1,700	2,158	6,630	371	334	705	496	482	921	1,899
1855	2,218	.....	1,234	1,815	5,267	367	393	768	697	405	852	1,954

1856	.....	2,548	.....	1,697	1,737	5,082	385	367	752	613	438	872	1,923
1857	.....	2,343	.....	1,624	1,542	5,509	.....	261	261	601	487	818	1,906
1858	.....	2,230	.....	1,737	1,138	5,105	.....	334	334	403	429	700	1,532
1859	.....	3,027	.....	2,346	1,217	6,590	.....	355	355	603	440	1,014	2,057
1860	.....	2,376	.....	2,052	1,021	5,449	.....	277	277	493	418	984	1,895
1861	.....	2,537	.....	2,149	754	5,440	.....	219	219	473	468	1,027	1,968
1862	.....	2,891	.....	1,854	1,039	5,784	.....	388	388	372	385	962	1,719
1863	.....	3,572	.....	1,817	1,442	6,831	.....	318	318	392	447	1,049	1,888
1864	.....	2,966	.....	1,530	1,553	6,049	.....	154	154	512	494	1,029	2,035
1865	.....	1,888	.....	1,028	730	3,646	.....	282	282	451	481	807	1,739
1866	.....	2,445	.....	1,975	456	4,876	.....	364	364	541	509	1,238	2,288
1867	.....	1,660	.....	1,184	617	3,461	.....	217	217	547	546	1,344	2,437
1868	.....	.....	.....	789	461	2,441	.....	224	224	546	598	1,488	2,632
1869	.....	.....	.....	778	408	2,777	.....	209	209	437	639	1,802	2,158
1870	.....	.....	.....	445	283	2,128	.....	236	236	551	503	1,306	2,360
1871	.....	.....	.....	412	276	2,167	.....	210	210	294	141	463	898
1872	.....	.....	.....	571	338	2,356	.....	117	117	214	169	271	654
1873	.....	.....	.....	360	258	2,180	.....	201	201	229	269	280	778
1874	.....	.....	.....	247	197	1,885	.....	130	130	179	214	287	680
1875	.....	.....	.....	.....	144	1,040	.....	.....	.....	.....	.....	244	244
1876	.....	.....	.....	.....	221	1,285	.....	.....	.....	.....	177	.....	177
1877	.....	.....	.....	.....	116	116	.....	.....	.....	.....	.....	.....	.....
1878	.....	.....	.....	.....	87	87	.....	.....	.....	.....	.....	.....	.....
1879	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1881	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1882	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1883	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1884	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

STATEMENT of the number of clearances issued at each office on all the canals, etc. — (Continued).

YEARS.	GENESEE VALLEY.						Total.
	Scottsville.	Mt. Morris.	Dansville.	Oramel.	Caneadea.	Olean.	
1833	.....	.....	.....	.....	.....	.....	.....
1834	.....	.....	.....	.....	.....	.....	.....
1835	.....	.....	.....	.....	.....	.....	.....
1836	.....	.....	.....	.....	.....	.....	.....
1837	.....	.....	.....	.....	.....	.....	.....
1838	.....	.....	.....	.....	.....	.....	.....
1839	.....	.....	.....	.....	.....	.....	.....
1840	..... 478	.....	.....	.....	.....	.....	..... 574
1841	..... 1,096	.....	.....	.....	.....	.....	..... 1,096
1842	..... 1,034	.....	..... 531	.....	.....	.....	..... 1,565
1843	..... 1,217	.....	..... 592	.....	.....	.....	..... 1,807
1844	..... 1,297	.....	..... 748	.....	.....	.....	..... 2,045
1845	..... 1,411	.....	..... 812	.....	.....	.....	..... 2,223
1846	..... 1,474	.....	..... 892	.....	.....	.....	..... 2,366
1847	..... 1,309	.....	..... 974	.....	.....	.....	..... 2,283
1848	..... 1,284	.....	..... 1,105	.....	.....	.....	..... 2,389
1849	..... 1,084	.....	..... 1,078	.....	.....	.....	..... 2,162
1850	..... 1,210	.....	..... 1,015	.....	.....	.....	..... 2,225
1851	..... 428	..... 355	..... 1,025	..... 329	.....	.....	..... 2,037
1852	..... 555	..... 261	..... 728	..... 270	.....	.....	..... 2,014
1853	..... 714	..... 983	..... 686	..... 514	.....	.....	..... 2,897

Statement of the number of clearances issued at each office on all the canals, etc. — (Concluded).

YEARS.	BLACK RIVER.			ONEIDA LAKE.	SENECA RIVER TOWING PATH.		Total.
	Boonville.	Lyons Falls.	Total.		Higgins.	SENECA RIVER TOWING PATH.	
						Baldwinsville.	
1854.....	817	.....	817	2,563	491	104,902
1855.....	933	.....	933	2,393	470	97,856
1856.....	834	.....	834	3,177	494	98,214
1857.....	900	.....	900	1,284	.....	79,425
1858.....	868	.....	868	1,339	.....	80,985
1859.....	989	.....	989	1,072	.....	78,354
1860.....	904	.....	904	672	.....	89,186
1861.....	917	.....	917	472	.....	84,634
1862.....	1,019	.....	1,019	.....	.....	91,972
1863.....	1,157	.....	1,157	.....	.....	90,065
1864.....	924	.....	924	.....	.....	76,981
1865.....	931	.....	931	.....	.....	70,449
1866.....	1,153	.....	1,153	.....	.....	81,734
1867.....	1,065	.....	1,065	.....	.....	78,416
1868.....	818	313	1,131	.....	.....	79,897
1869.....	795	440	1,235	.....	.....	76,658
1870.....	776	577	1,353	.....	.....	78,291
1871.....	577	604	1,181	.....	.....	77,878
1872.....	599	668	1,267	.....	.....	78,806
1873.....	427	590	1,017	.....	.....	77,372
1874.....	835	.....	835	.....	.....	68,398

1875	.....	754	.....	.....	.....	55,328
1876	.....	824	.....	.....	.....	50,243
1877	.....	734	.....	.....	.....	48,672
1878	.....	776	.....	.....	.....	51,029
1879	.....	873	.....	.....	.....	48,905
1880	.....	1,039	.....	.....	.....	58,161
1881	.....	1,098	.....	.....	.....	43,076
1882	.....	1,224	.....	.....	.....	46,184
1883	.....	1,406	.....	.....	.....	42,739
1884	.....	1,269	.....	.....	.....	.....
1885	.....	.....	.....	.....	.....	.....
1886	.....	1,213	.....	.....	.....	40,587
1887	.....	1,175	.....	.....	.....	42,721
1888	.....	1,119	.....	.....	.....	36,246

The following table gives the number of boats registered each year since 1844, the total tonnage each year, and the average tonnage of each boat registered.

YEARS.	Boats.	Tons.	Average of boats.
1844.....	378	24,360	64 tons.
1845.....	297	19,781	67 do
1846.....	477	34,630	73 do
1847.....	466	110,745	76 do
1848.....	457	33,815	74 do
1849.....	215	16,370	76 do
1850.....	152	12,260	80 do
1851.....	213	18,450	87 do
1852.....	271	23,945	88 do
1853.....	590	57,280	97 do
1854.....	760	80,365	105 do
1855.....	471	48,220	102 do
1856.....	364	38,990	107 do
1857.....	329	37,510	114 do
1858.....	255	27,830	109 do
1859.....	206	20,150	98 do
1860.....	403	48,355	120 do
1861.....	619	95,230	154 do
1862.....	850	142,470	168 do
1863.....	771	119,170	177 do
1864.....	399	56,235	141 do
1865.....	200	28,795	144 do
1866.....	485	74,630	154 do
1867.....	520	80,360	155 do
1868.....	387	64,470	167 do
1869.....	298	46,650	157 do
1870.....	269	42,365	157 do
1871.....	194	29,225	151 do
1872.....	326	57,925	178 do
1873.....	433	79,740	184 do
1874.....	239	45,960	183 do
1875.....	102	17,435	171 do
1876.....	75	10,825	144 do
1877.....	69	9,185	133 do
1878.....	300	48,365	161 do
1879.....	382	64,645	169 do
1880.....	439	93,285	212 do
1881.....	368	69,065	188 do
1882.....	93	13,275	143 do
1883.....	76	11,361	149 do

Number of boats registered since 1844, tonnage, etc.—(Concluded).

YEARS.	Boats.	Tons.	Average of boats.
1884.....	60	9,999	166 tons.
1885.....	34	5,596	164 do
1886.....	53	11,005	208 do
1887.....	157	34,298	218 do
1888.....	85	18,753	220 do

Value of the real and personal property in this State for year 1820.

Albany	\$7,631,583
Allegany	807,595
Broome	2,306,627
Cattaraugus	1,786,217
Cayuga	3,408,185
Chautauqua	1,702,871
Chemung (erected in 1836)	
Chenango	3,326,736
Clinton	1,334,966
Columbia	6,619,276
Cortland	1,799,130
Delaware	3,845,541
Dutchess	13,953,956
Erie (erected in 1821)	
Essex	994,348
Franklin	614,631
Fulton (erected in 1838)	
Genesee	6,834,423
Greene	4,433,874
Hamilton (not assessed in 1820)	
Herkimer	5,169,989
Jefferson	2,491,083
Kings	3,546,073
Lewis	1,527,390
Livingston (erected in 1821)	
Madison	4,154,499
Monroe (erected in 1821)	
Montgomery	5,845,461
New York	69,530,753
Niagara	3,391,506
Oneida	6,859,113
Onondaga	3,272,302
Ontario	8,777,781
Orange	7,780,088
Orleans (erected in 1824)	
Oswego	1,425,568
Otsego	4,782,666
Putnam	1,753,387
Queens	5,803,835
Rensselaer	7,206,167

Richmond	\$672,535
Rockland	2,209,265
Saratoga	6,543,603
Schenectady	1,870,163
Schoharie	3,802,244
Schuyler (erected in 1854) .....	.....
Seneca	3,187,630
St. Lawrence	1,765,688
Steuben	1,624,184
Suffolk	5,267,141
Sullivan	1,392,606
Tioga	1,871,147
Tompkins	1,415,159
Ulster	2,259,716
Warren	1,153,860
Washington	5,880,771
Wayne (erected in 1823) .....	.....
Westchester	10,293,159
Wyoming (erected in 1841) .....	.....
Yates (erected in 1823) .....	.....
Total	<u>\$256,021,491</u>

*Equalized value of the real and personal property in this State for
year 1888.*

Albany	\$88,333,305
Allegany	14,568,641
Broome	22,272,710
Cattaraugus	16,173,925
Cayuga	30,808,110
Chautauqua	25,771,555
Chemung	19,099,830
Chenango	18,118,220
Clinton	9,683,910
Columbia	29,955,750
Cortland	11,210,158
Delaware	14,032,532
Dutchess	44,699,381
Erie	134,797,474
Essex	10,534,760

Franklin.....	\$7,911,400
Fulton	8,453,675
Genesee	21,636,405
Greene	13,819,288
Hamilton	1,158,250
Herkimer	23,800,792
Jefferson.....	23,927,649
Kings	365,217,391
Lewis	9,121,450
Livingston.....	25,559,583
Madison	19,220,560
Monroe.....	88,767,845
Montgomery	24,752,543
New York.....	1,560,373,506
Niagara.....	26,573,990
Oneida	58,940,987
Onondaga	64,697,612
Ontario.....	29,577,531
Orange	43,276,880
Orleans.....	14,977,356
Oswego.....	24,024,277
Otsego	23,603,635
Putnam.....	7,419,780
Queens	46,015,366
Rensselaer	61,860,536
Richmond	12,303,584
Rockland	13,447,135
Saratoga.....	23,446,242
Schenectady	12,873,776
Schoharie.....	10,383,430
Schuyler.....	7,307,600
Seneca	15,372,240
St. Lawrence.....	24,784,935
Steuben	23,033,928
Suffolk	17,225,386
Sullivan	5,419,150
Tioga	12,210,687
Tompkins.....	15,416,705
Ulster	25,438,920
Warren.....	6,538,975

Washington.....	\$22,392,748
Wayne	25,763,026
Westchester.....	83,448,266
Wyoming.....	14,960,063
Yates.....	12,684,532
<hr/>	
Total.....	\$3,469,199,945
<hr/>	

A tax of one mill on each dollar of the above assessed valuation will yield \$3,469,199.94. In 1887 there was levied a tax of twenty-four one-hundredths of a mill for the ordinary repairs of the canal and the maintenance thereof for the fiscal year beginning October 1, 1888. This tax of less than a quarter of a mill upon each dollar valuation will yield a tax of \$832,607.98 upon the above valuation.

Total tonnage of all the property on the canals ascending and descending, and the value for the fifty years preceding, is as follows:

YEARS.	Tons.	Value.
1837.....	1,171,296	\$55,809,288
1838.....	1,333,011	65,746,559
1839.....	1,435,713	73,399,764
1840.....	1,416,046	66,303,892
1841.....	1,521,661	92,202,929
1842.....	1,236,931	60,016,608
1843.....	1,513,439	76,276,909
1844.....	1,816,586	90,921,152
1845.....	1,977,565	100,629,859
1846.....	2,268,662	115,612,109
1847.....	2,869,810	151,563,428
1848.....	2,796,230	140,086,157
1849.....	2,894,732	144,732,285
1850.....	3,076,617	156,397,929
1851.....	2,582,733	159,981,801
1852.....	3,863,441	196,603,517
1853.....	4,247,853	207,179,570
1854.....	4,165,862	210,284,312
1855.....	4,022,617	204,390,147
1856.....	4,116,082	218,327,062
1857.....	3,344,061	136,997,018
1858.....	3,665,192	138,568,844
1859.....	3,781,684	132,160,758
1860.....	4,650,214	170,849,198
1861.....	4,507,635	130,115,893
1862.....	5,598,785	203,234,331
1863.....	5,557,692	240,046,461
1864.....	4,852,941	274,400,639
1865.....	4,729,654	256,237,104
1866.....	5,775,220	270,963,676
1867.....	5,688,325	278,956,712
1868.....	6,442,225	305,301,929
1869.....	5,859,080	249,281,284
1870.....	6,173,769	231,836,176
1871.....	6,467,888	238,767,691
1872.....	6,673,370	220,913,321
1873.....	6,364,782	191,715,500
1874.....	5,804,588	196,674,322
1875.....	4,859,958	145,008,575
1876.....	4,172,129	113,090,379
1877.....	4,955,963	128,923,890
1878.....	5,171,320	182,254,528

Tonnage of property — (Concluded).

YEARS.	Tons.	Value.
1879.....	5,362,372	\$285,280,726
1880.....	6,457,656	247,844,790
1881.....	5,179,192	162,153,565
1882.....	5,467,423	147,918,907
1883.....	5,664,056	147,861,223
1884.....	5,009,488	162,097,069
1885.....	4,731,784	119,536,189
1886.....	5,293,982	180,061,846
1887.....	5,553,805	159,245,977
1888.....	4,942,948	122,524,735

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